



Matlab Projects for Engineering Students

www.statanalytica.com

Matlab Projects For Engineering Students

**Vivian Siahaan, Rismon Hasiholan
Sianipar**



Matlab Projects For Engineering Students:

Octave and MATLAB for Engineering Applications Andreas Stahel, 2022-05-28 For many engineering tasks extensive computations or visualizations are required. The well established Matlab and Octave, a very similar open source software, are excellent tools for modeling, computing, and visualization. This book will help the reader to acquire basic knowledge and elementary programming skills with Octave. Matlab Basic data and programming structures are presented, and for the most often used commands illustrative code samples are provided. The selection of the presented commands is guided by the typical needs of engineers. With these skills, many and more difficult problems can be solved successfully. It is shown how basic statistical questions can be answered and how results are visualized using appropriate types of graphical representation. A selection of typical independent engineering problems is presented together with algorithms to solve these problems. Special attention is given to the methods of linear and nonlinear regression. The high level tool Matlab/Octave is used to develop computational code for micro controllers. The codes and data files for the book are available on Github and on Springer Link. **Target Groups:** Students in electrical and mechanical engineering and engineering fields in general. **Working engineers.**

An Inquiry-Based Introduction to Engineering Michelle Blum, 2022-09-20 The text introduces engineering to first year undergraduate students using Inquiry Based Learning (IBL). It draws on several different inquiry based instruction types such as confirmation inquiry, structured inquiry, guided inquiry, and open inquiry, and all of their common elements. Professor Blum's approach emphasizes the student's role in the learning process, empowering them in the classroom to explore the material, ask questions, and share ideas instead of the instructor lecturing to passive learners about what they need to know. Beginning with a preface to IBL, the book is organized into three parts, each consisting of four to ten chapters. Each chapter has a dedicated topic where an initial few paragraphs of introductory or fundamental material are provided. This is followed by a series of focused questions that guide the students' learning about the concepts being taught. Featuring multiple inquiry based strategies, each most appropriate to the topic, *An Inquiry Based Approach to Introduction to Engineering* stands as an easy to use textbook that quickly allows students to actively engage with the content during every class period.

Projects in Electrical, Electronics, instrumentation and Computer Engineering SK Bhattacharya | S Chatterjee, The objective of this book has been to provide the students with reference material to select and work on doing various projects related to their subjects of study. The projects included in this book have been tried out and hence are realistic. The selection of the projects has been done carefully to reflect the real life job situations and also to develop in students the higher order intellectual abilities, i.e. their capability to analyze, synthesize, and decision making through real life like project activities. **Key Features:** All Projects are real life like. Projects included have been tried out by the authors. Includes variety of projects from interdisciplinary areas.

Programming Projects in C for Students of Engineering, Science, and Mathematics Rouben Rostamian, 2014-09-03 Like a pianist who practices from a book of tunes, readers of *Programming*

Projects in C for Students of Engineering Science and Mathematics will learn by doing Written as a tutorial on how to think about organize and implement programs in scientific computing this book achieves its goal through an eclectic and wide ranging collection of projects Each project presents a problem and an algorithm for solving it The reader is guided through implementing the algorithm in C and compiling and testing the results It is not necessary to carry out the projects in sequential order The projects contain suggested algorithms and partially completed programs for implementing them to enable the reader to exercise and develop skills in scientific computing require only a working knowledge of undergraduate multivariable calculus differential equations and linear algebra and are written in platform independent standard C the Unix command line is used to illustrate compilation and execution

Electromagnetic Modeling and Simulation

Levent Sevgi,2014-03-13 This unique book presents simple easy to use but effective short codes as well as virtual tools that can be used by electrical electronic communication and computer engineers in a broad range of electrical engineering problems Electromagnetic modeling is essential to the design and modeling of antenna radar satellite medical imaging and other applications In this book author Levent Sevgi explains techniques for solving real time complex physical problems using MATLAB based short scripts and comprehensive virtual tools Unique in coverage and tutorial approach Electromagnetic Modeling and Simulation covers fundamental analytical and numerical models that are widely used in teaching research and engineering designs including mode and ray summation approaches with the canonical 2D nonpenetrable parallel plate waveguide as well as FDTD MoM and SSPE scripts The book also establishes an intelligent balance among the essentials of EM MODSIM The Problem the physics The Theory and Models mathematical background and analytical solutions and The Simulations code developing plus validation verification and calibration Classroom tested in graduate level and short courses Electromagnetic Modeling and Simulation Clarifies concepts through numerous worked problems and quizzes provided throughout the book Features valuable MATLAB based user friendly effective engineering and research virtual design tools Includes sample scenarios and video clips recorded during characteristic simulations that visually impact learning available on wiley com Provides readers with their first steps in EM MODSIM as well as tools for medium and high level code developers and users Electromagnetic Modeling and Simulation thoroughly covers the physics mathematical background analytical solutions and code development of electromagnetic modeling making it an ideal resource for electrical engineers and researchers

Matlab - Modelling, Programming and Simulations Emilson Pereira Leite,2010

Intelligent Robotics and Applications Sabina Jeschke,Honghai Liu,Daniel Schilberg,2011-12-03 The two volume set LNAI 7101 and LNAI 7102 constitutes the refereed proceedings of the 4th International Conference on Intelligent Robotics and Applications ICIRA 2011 held in Aachen Germany in November 2011 The 122 revised full papers presented were thoroughly reviewed and selected from numerous submissions They are organized in topical sections on progress in indoor UAV robotics intelligence industrial robots rehabilitation robotics mechanisms and their applications multi robot systems robot mechanism and design parallel

kinematics parallel kinematics machines and parallel robotics handling and manipulation tangibility in human machine interaction navigation and localization of mobile robot a body for the brain embodied intelligence in bio inspired robotics intelligent visual systems self optimising production systems computational intelligence robot control systems human robot interaction manipulators and applications stability dynamics and interpolation evolutionary robotics bio inspired robotics and image processing applications

FIVE PROJECTS: POSTGRESQL AND PYTHON GUI FOR DATA ANALYSIS Vivian Siahaan, Rismon Hasiholan Sianipar, 2022-11-03

PROJECT 1 ZERO TO MASTERY THE COMPLETE GUIDE TO LEARNING POSTGRESQL WITH PYTHON GUI This book uses the PostgreSQL version of MySQL based Northwind database The Northwind database is a sample database that was originally created by Microsoft and used as the basis for their tutorials in a variety of database products for decades The Northwind database contains the sales data for a fictitious company called Northwind Traders which imports and exports specialty foods from around the world The Northwind database is an excellent tutorial schema for a small business ERP with customers orders inventory purchasing suppliers shipping employees and single entry accounting The Northwind database has since been ported to a variety of non Microsoft databases including PostgreSQL The Northwind dataset includes sample data for the following Suppliers Suppliers and vendors of Northwind Customers Customers who buy products from Northwind Employees Employee details of Northwind traders Products Product information Shippers The details of the shippers who ship the products from the traders to the end customers and Orders and Order_Details Sales Order transactions taking place between the customers the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by supplier top 10 sales by supplier bottom 10 sales by customer country top 10 sales by customer country bottom 10 sales by supplier country top 10 sales by supplier country average amount by month with mean and ewm average amount by every month amount feature over June 1997 amount feature over 1998 and all amount feature

PROJECT 2 FULL SOURCE CODE POSTGRESQL AND DATA SCIENCE FOR PROGRAMMERS WITH PYTHON GUI This project uses the PostgreSQL version of MySQL based Sakila sample database which is a fictitious database designed to represent a DVD rental store The tables of the database include film film_category actor film_actor customer rental payment and inventory among others You can download the database from <https://dev.mysql.com/doc/sakila/en> In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of film release year film rating rental duration and categorize film length plot rating variable against rental_duration variable in stacked bar plots plot length variable against rental_duration variable in stacked bar plots read payment table plot case distribution of Year Day Month Week and Quarter of payment plot which year month week days of week and quarter have most payment amount read film list by joining five tables category film_category film_actor film and actor plot case distribution of top 10 and bottom 10

actors plot which film title have least and most sales plot which actor have least and most sales plot which film category have least and most sales plot case distribution of top 10 and bottom 10 overdue costumers plot which store have most sales plot average payment amount by month with mean and EWM and plot payment amount over June 2005 PROJECT 3 FULL SOURCE CODE POSTGRESQL FOR DATA ANALYTICS AND VISUALIZATION WITH PYTHON GUI In this project we provide you with a PostgreSQL version of an Oracle sample database named OT which is based on a global fictitious company that sells computer hardware including storage motherboard RAM video card and CPU The company maintains the product information such as name description standard cost list price and product line It also tracks the inventory information for all products including warehouses where products are available Because the company operates globally it has warehouses in various locations around the world The company records all customer information including name address and website Each customer has at least one contact person with detailed information including name email and phone The company also places a credit limit on each customer to limit the amount that customer can owe Whenever a customer issues a purchase order a sales order is created in the database with the pending status When the company ships the order the order status becomes shipped In case the customer cancels an order the order status becomes canceled In addition to the sales information the employee data is recorded with some basic information such as name email phone job title manager and hire date In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of order date by year quarter month week and day the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by category top 10 sales by category bottom 10 sales by status top 10 sales by status bottom 10 sales by customer city top 10 sales by customer city bottom 10 sales by customer state top 10 sales by customer state average amount by month with mean and EWM average amount by every month amount feature over June 2016 amount feature over 2017 and amount payment in all years PROJECT 4 FULL SOURCE CODE POSTGRESQL FOR DATA SCIENTISTS AND DATA ANALYSTS WITH PYTHON GUI In this project we will use the PostgreSQL version of SQL Server based BikeStores as a sample database to help you work with PostgreSQL quickly and effectively The detailed structure of database can be found at <https://www.sqlservertutorial.net/sql-server-sample-database/> The stores table includes the store s information Each store has a store name contact information such as phone and email and an address including street city state and zip code The staffs table stores the essential information of staffs including first name last name It also contains the communication information such as email and phone A staff works at a store specified by the value in the store_id column A store can have one or more staffs A staff reports to a store manager specified by the value in the manager_id column If the value in the manager_id is null then the staff is the top manager If a staff no longer works for any stores the value in the active column is set to zero The categories table stores the

bike s categories such as children bicycles comfort bicycles and electric bikes The products table stores the product s information such as name brand category model year and list price Each product belongs to a brand specified by the brand_id column Hence a brand may have zero or many products Each product also belongs a category specified by the category_id column Also each category may have zero or many products The customers table stores customer s information including first name last name phone email street city state zip code and photo path The orders table stores the sales order s header information including customer order status order date required date shipped date It also stores the information on where the sales transaction was created store and who created it staff Each sales order has a row in the sales_orders table A sales order has one or many line items stored in the order_items table The order_items table stores the line items of a sales order Each line item belongs to a sales order specified by the order_id column A sales order line item includes product order quantity list price and discount The stocks table stores the inventory information i e the quantity of a particular product in a specific store In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of order date by year quarter month week day and hour the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by category top 10 sales by category bottom 10 sales by brand top 10 sales by brand bottom 10 sales by customer city top 10 sales by customer city bottom 10 sales by customer state top 10 sales by customer state average amount by month with mean and EWM average amount by every month amount feature over June 2017 amount feature over 2018 and all amount feature

PROJECT 5 FULL SOURCE CODE THE COMPLETE GUIDE TO LEARNING POSTGRESQL AND DATA SCIENCE WITH PYTHON GUI

In this project we provide you with the PostgreSQL version of SQLite sample database named chinook The chinook sample database is a good database for practicing with SQL especially PostgreSQL The detailed description of the database can be found on <https://www.sqlitetutorial.net/sqlite-sample-database/> The sample database consists of 11 tables The employee table stores employees data such as employee id last name first name etc It also has a field named ReportsTo to specify who reports to whom customers table stores customers data invoices The artist table stores artists data It is a simple table that contains only the artist id and name The album table stores data about a list of tracks Each album belongs to one artist However one artist may have multiple albums The media_type table stores media types such as MPEG audio and AAC audio files genre table stores music types such as rock jazz metal etc The track table stores the data of songs Each track belongs to one album playlist the distribution of amount by year quarter month week day and hour the bottom top 10 sales by employee the bottom top 10 sales by customer the bottom top 10 sales by customer the bottom top 10 sales by artist the bottom top 10 sales by genre the bottom top 10 sales by play list the bottom top 10 sales by customer city the bottom top 10 sales by customer city the bottom top 10 sales by customer city the payment amount by month with mean and EWM the

average payment amount by every month and amount payment in all years

FIVE PROJECTS: SQLITE AND PYTHON GUI FOR DATA ANALYSIS Vivian Siahaan, Rismon Hasiholan Sianipar, 2022-11-03

PROJECT 1 FULL SOURCE CODE

PRACTICAL DATA SCIENCE WITH SQLITE AND PYTHON GUI In this project we provide you with the SQLite sample database named chinook. The chinook sample database is a good database for practicing with SQL, especially SQLite. The detailed description of the database can be found on <https://www.sqlitetutorial.net/sqlite-sample-database/>. There are 11 tables in the chinook sample database. The employee table stores employees data such as employee id, last name, first name, etc. It also has a field named ReportsTo to specify who reports to whom. The customers table stores customers data. The invoices table stores artists data. It is a simple table that contains only the artist id and name. The album table stores data about a list of tracks. Each album belongs to one artist. However, one artist may have multiple albums. The media_type table stores media types such as MPEG audio and AAC audio files. The genre table stores music types such as rock, jazz, metal, etc. The track table stores the data of songs. Each track belongs to one album. The playlist table stores the distribution of amount by year, quarter, month, week, day, and hour. The bottom_top_10_sales_by_employee table stores the bottom top 10 sales by employee. The bottom_top_10_sales_by_customer table stores the bottom top 10 sales by customer. The bottom_top_10_sales_by_artist table stores the bottom top 10 sales by artist. The bottom_top_10_sales_by_genre table stores the bottom top 10 sales by genre. The bottom_top_10_sales_by_playlist table stores the bottom top 10 sales by playlist. The bottom_top_10_sales_by_customer_city table stores the bottom top 10 sales by customer city. The bottom_top_10_sales_by_customer_city table stores the bottom top 10 sales by customer city. The payment table stores the payment amount by month with mean and EWM. The average payment amount by every month and amount payment in all years.

PROJECT 2 FULL SOURCE CODE

SQLITE FOR STUDENTS AND PROGRAMMERS WITH PYTHON GUI In this project we provide you with a SQLITE version of an Oracle sample database named OT, which is based on a global fictitious company that sells computer hardware including storage, motherboard, RAM, video card, and CPU. You can find the detailed structures of the database on <https://www.oracletutorial.com/getting-started/oracle-sample-database/>. The company maintains the product information such as name, description, standard cost, list price, and product line. It also tracks the inventory information for all products including warehouses where products are available. Because the company operates globally, it has warehouses in various locations around the world. The company records all customer information including name, address, and website. Each customer has at least one contact person with detailed information including name, email, and phone. The company also places a credit limit on each customer to limit the amount that customer can owe. Whenever a customer issues a purchase order, a sales order is created in the database with the pending status. When the company ships the order, the order status becomes shipped. In case the customer cancels an order, the order status becomes canceled. In addition to the sales information, the employee data is recorded with some basic information such as name, email, phone, job title, manager, and hire date. In this project, you will write Python script to create every table and insert rows of data into each of them. You will develop GUI with PyQt5 to each table in the database. You will also create GUI to plot case distribution of order date by year, quarter, month, week, and day. The distribution of amount by year, quarter, month, week, day, and hour. The distribution of bottom 10 sales by product, top 10 sales

by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by category top 10 sales by category bottom 10 sales by status top 10 sales by status bottom 10 sales by customer city top 10 sales by customer city bottom 10 sales by customer state top 10 sales by customer state average amount by month with mean and EWM average amount by every month amount feature over June 2016 amount feature over 2017 and amount payment in all years PROJECT 3 SQLITE FOR DATA ANALYST AND DATA SCIENTIST WITH PYTHON GUI In this project we will use the SQLite version of BikeStores database as a sample database to help you work with MySQL quickly and effectively The stores table includes the store s information Each store has a store name contact information such as phone and email and an address including street city state and zip code The staffs table stores the essential information of staffs including first name last name It also contains the communication information such as email and phone A staff works at a store specified by the value in the store_id column A store can have one or more staffs A staff reports to a store manager specified by the value in the manager_id column If the value in the manager_id is null then the staff is the top manager If a staff no longer works for any stores the value in the active column is set to zero The categories table stores the bike s categories such as children bicycles comfort bicycles and electric bikes The products table stores the product s information such as name brand category model year and list price Each product belongs to a brand specified by the brand_id column Hence a brand may have zero or many products Each product also belongs a category specified by the category_id column Also each category may have zero or many products The customers table stores customer s information including first name last name phone email street city state zip code and photo path The orders table stores the sales order s header information including customer order status order date required date shipped date It also stores the information on where the sales transaction was created store and who created it staff Each sales order has a row in the sales_orders table A sales order has one or many line items stored in the order_items table The order_items table stores the line items of a sales order Each line item belongs to a sales order specified by the order_id column A sales order line item includes product order quantity list price and discount The stocks table stores the inventory information i e the quantity of a particular product in a specific store In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of order date by year quarter month week day and hour the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by category top 10 sales by category bottom 10 sales by brand top 10 sales by brand bottom 10 sales by customer city top 10 sales by customer city bottom 10 sales by customer state top 10 sales by customer state average amount by month with mean and EWM average amount by every month amount feature over June 2017 amount feature over 2018 and all amount feature PROJECT 4 SQLITE FOR DATA ANALYSIS AND VISUALIZATION WITH PYTHON GUI In this project you will use SQLite version of Northwind database which is a sample

database that was originally created by Microsoft and used as the basis for their tutorials in a variety of database products for decades The Northwind database contains the sales data for a fictitious company called Northwind Traders which imports and exports specialty foods from around the world The Northwind database is an excellent tutorial schema for a small business ERP with customers orders inventory purchasing suppliers shipping employees and single entry accounting The Northwind dataset includes sample data for the following Suppliers Suppliers and vendors of Northwind Customers Customers who buy products from Northwind Employees Employee details of Northwind traders Products Product information Shippers The details of the shippers who ship the products from the traders to the end customers Orders and Order_Details Sales Order transactions taking place between the customers the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by supplier top 10 sales by supplier bottom 10 sales by customer country top 10 sales by customer country bottom 10 sales by supplier country top 10 sales by supplier country average amount by month with mean and ewm average amount by every month amount feature over June 1997 amount feature over 1998 and all amount feature

PROJECT 5 ZERO TO MASTERY THE COMPLETE GUIDE TO LEARNING SQLITE AND PYTHON GUI In this project we provide you with the SQLite version of The Oracle Database Sample Schemas that provides a common platform for examples in each release of the Oracle Database The sample database is also a good database for practicing with SQL especially SQLite The detailed description of the database can be found on <http://luna.ext.oracle.com/server/112/e10831/diagrams.htm> insertedID0 The four schemas are a set of interlinked schemas This set of schemas provides a layered approach to complexity A simple schema Human Resources HR is useful for introducing basic topics An extension to this schema supports Oracle Internet Directory demos A second schema Order Entry OE is useful for dealing with matters of intermediate complexity Many data types are available in this schema including non scalar data types The Online Catalog OC subschema is a collection of object relational database objects built inside the OE schema The Product Media PM schema is dedicated to multimedia data types The Sales History SH schema is designed to allow for demos with large amounts of data An extension to this schema provides support for advanced analytic processing The HR schema consists of seven tables regions countries locations departments employees jobs and job_histories This book only implements HR schema since the other schemas will be implemented in the next books

[PYTHON GUI PROJECTS WITH MACHINE LEARNING AND DEEP LEARNING](#) Vivian Siahaan,Rismon Hasiholan Sianipar,2022-01-16

PROJECT 1 THE APPLIED DATA SCIENCE WORKSHOP

Prostate Cancer Classification and Recognition Using Machine Learning and Deep Learning with Python GUI Prostate cancer is cancer that occurs in the prostate The prostate is a small walnut shaped gland in males that produces the seminal fluid that nourishes and transports sperm Prostate cancer is one of the most common types of cancer Many prostate cancers grow slowly and are confined to the prostate gland where they may not cause serious harm However while some types of prostate

cancer grow slowly and may need minimal or even no treatment other types are aggressive and can spread quickly The dataset used in this project consists of 100 patients which can be used to implement the machine learning and deep learning algorithms The dataset consists of 100 observations and 10 variables out of which 8 numeric variables and one categorical variable and is ID which are as follows Id Radius Texture Perimeter Area Smoothness Compactness Diagnosis Result Symmetry and Fractal Dimension The models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine Adaboost LGBM classifier Gradient Boosting XGB classifier MLP classifier and CNN 1D Finally you will develop a GUI using PyQt5 to plot boundary decision ROC distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

PROJECT 2 THE APPLIED DATA SCIENCE WORKSHOP

Urinary Biomarkers Based Pancreatic Cancer Classification and Prediction Using Machine Learning with Python GUI

Pancreatic cancer is an extremely deadly type of cancer Once diagnosed the five year survival rate is less than 10% However if pancreatic cancer is caught early the odds of surviving are much better Unfortunately many cases of pancreatic cancer show no symptoms until the cancer has spread throughout the body A diagnostic test to identify people with pancreatic cancer could be enormously helpful In a paper by Silvana Debernardi and colleagues published this year in the journal PLOS Medicine a multi national team of researchers sought to develop an accurate diagnostic test for the most common type of pancreatic cancer called pancreatic ductal adenocarcinoma or PDAC They gathered a series of biomarkers from the urine of three groups of patients Healthy controls Patients with non cancerous pancreatic conditions like chronic pancreatitis and Patients with pancreatic ductal adenocarcinoma When possible these patients were age and sex matched The goal was to develop an accurate way to identify patients with pancreatic cancer The key features are four urinary biomarkers creatinine LYVE1 REG1B and TFF1 Creatinine is a protein that is often used as an indicator of kidney function YVLE1 is lymphatic vessel endothelial hyaluronan receptor 1 a protein that may play a role in tumor metastasis REG1B is a protein that may be associated with pancreas regeneration TFF1 is trefoil factor 1 which may be related to regeneration and repair of the urinary tract The models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine Adaboost LGBM classifier Gradient Boosting XGB classifier and MLP classifier Finally you will develop a GUI using PyQt5 to plot boundary decision ROC distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

PROJECT 3 DATA SCIENCE CRASH COURSE

Voice Based Gender Classification and Prediction Using Machine Learning and Deep Learning with Python GUI

This dataset was created to identify a voice as male or female based upon acoustic properties of the voice and speech The dataset consists of 3 168 recorded voice samples collected from male and female speakers The voice samples are pre processed by acoustic

analysis in R using the seewave and tuneR packages with an analyzed frequency range of 0hz 280hz human vocal range The following acoustic properties of each voice are measured and included within the CSV meanfreq mean frequency in kHz sd standard deviation of frequency median median frequency in kHz Q25 first quantile in kHz Q75 third quantile in kHz IQR interquantile range in kHz skew skewness kurt kurtosis sp ent spectral entropy sfm spectral flatness mode mode frequency centroid frequency centroid see specprop peakf peak frequency frequency with highest energy meanfun average of fundamental frequency measured across acoustic signal minfun minimum fundamental frequency measured across acoustic signal maxfun maximum fundamental frequency measured across acoustic signal meandom average of dominant frequency measured across acoustic signal mindom minimum of dominant frequency measured across acoustic signal maxdom maximum of dominant frequency measured across acoustic signal dfrange range of dominant frequency measured across acoustic signal modindx modulation index Calculated as the accumulated absolute difference between adjacent measurements of fundamental frequencies divided by the frequency range and label male or female The models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine Adaboost LGBM classifier Gradient Boosting XGB classifier MLP classifier and CNN 1D Finally you will develop a GUI using PyQt5 to plot boundary decision ROC distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

PROJECT 4 DATA SCIENCE CRASH COURSE Thyroid Disease Classification and Prediction Using Machine Learning and Deep Learning with Python GUI Thyroid disease is a general term for a medical condition that keeps your thyroid from making the right amount of hormones Thyroid typically makes hormones that keep body functioning normally When the thyroid makes too much thyroid hormone body uses energy too quickly The two main types of thyroid disease are hypothyroidism and hyperthyroidism Both conditions can be caused by other diseases that impact the way the thyroid gland works Dataset used in this project was from Garavan Institute Documentation as given by Ross Quinlan 6 databases from the Garavan Institute in Sydney Australia Approximately the following for each database 2800 training data instances and 972 test instances This dataset contains plenty of missing data while 29 or so attributes either Boolean or continuously valued The models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine Adaboost LGBM classifier Gradient Boosting XGB classifier MLP classifier and CNN 1D Finally you will develop a GUI using PyQt5 to plot boundary decision ROC distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

FOUR PROJECTS: MYSQL AND PYTHON GUI FOR DATA ANALYSIS

Vivian Siahaan, Rismon Hasiholan Sianipar, 2022-11-04 **PROJECT 1 FULL SOURCE CODE MYSQL FOR STUDENTS AND PROGRAMMERS WITH PYTHON GUI** In this project we provide you with a MySQL version of an Oracle sample database

named OT which is based on a global fictitious company that sells computer hardware including storage motherboard RAM video card and CPU The company maintains the product information such as name description standard cost list price and product line It also tracks the inventory information for all products including warehouses where products are available Because the company operates globally it has warehouses in various locations around the world The company records all customer information including name address and website Each customer has at least one contact person with detailed information including name email and phone The company also places a credit limit on each customer to limit the amount that customer can owe Whenever a customer issues a purchase order a sales order is created in the database with the pending status When the company ships the order the order status becomes shipped In case the customer cancels an order the order status becomes canceled In addition to the sales information the employee data is recorded with some basic information such as name email phone job title manager and hire date In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of order date by year quarter month week and day the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by category top 10 sales by category bottom 10 sales by status top 10 sales by status bottom 10 sales by customer city top 10 sales by customer city bottom 10 sales by customer state top 10 sales by customer state average amount by month with mean and EWM average amount by every month amount feature over June 2016 amount feature over 2017 and amount payment in all years PROJECT 2 MYSQL FOR DATA ANALYST AND DATA SCIENTIST WITH PYTHON GUI In this project we will use the BikeStores database as a MySQL sample database to help you work with MySQL quickly and effectively The stores table includes the store s information Each store has a store name contact information such as phone and email and an address including street city state and zip code The staffs table stores the essential information of staffs including first name last name It also contains the communication information such as email and phone A staff works at a store specified by the value in the store_id column A store can have one or more staffs A staff reports to a store manager specified by the value in the manager_id column If the value in the manager_id is null then the staff is the top manager If a staff no longer works for any stores the value in the active column is set to zero The categories table stores the bike s categories such as children bicycles comfort bicycles and electric bikes The products table stores the product s information such as name brand category model year and list price Each product belongs to a brand specified by the brand_id column Hence a brand may have zero or many products Each product also belongs a category specified by the category_id column Also each category may have zero or many products The customers table stores customer s information including first name last name phone email street city state zip code and photo path The orders table stores the sales order s header information including customer order status order date required date shipped date It also

stores the information on where the sales transaction was created store and who created it staff Each sales order has a row in the sales_orders table A sales order has one or many line items stored in the order_items table The order_items table stores the line items of a sales order Each line item belongs to a sales order specified by the order_id column A sales order line item includes product order quantity list price and discount The stocks table stores the inventory information i e the quantity of a particular product in a specific store In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of order date by year quarter month week day and hour the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by category top 10 sales by category bottom 10 sales by brand top 10 sales by brand bottom 10 sales by customer city top 10 sales by customer city bottom 10 sales by customer state top 10 sales by customer state average amount by month with mean and EWM average amount by every month amount feature over June 2017 amount feature over 2018 and all amount feature PROJECT 3 MYSQL FOR DATA ANALYSIS AND VISUALIZATION WITH PYTHON GUI In this project you will use the Northwind database which is a sample database that was originally created by Microsoft and used as the basis for their tutorials in a variety of database products for decades The Northwind database contains the sales data for a fictitious company called Northwind Traders which imports and exports specialty foods from around the world The Northwind database is an excellent tutorial schema for a small business ERP with customers orders inventory purchasing suppliers shipping employees and single entry accounting The Northwind dataset includes sample data for the following Suppliers Suppliers and vendors of Northwind Customers Customers who buy products from Northwind Employees Employee details of Northwind traders Products Product information Shippers The details of the shippers who ship the products from the traders to the end customers Orders and Order_Details Sales Order transactions taking place between the customers the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by supplier top 10 sales by supplier bottom 10 sales by customer country top 10 sales by customer country bottom 10 sales by supplier country top 10 sales by supplier country average amount by month with mean and ewm average amount by every month amount feature over june 1997 amount feature over 1998 and all amount feature PROJECT 4 MYSQL AND DATA SCIENCE QUERIES AND VISUALIZATION WITH PYTHON GUI In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of film release year film rating rental duration and categorize film length plot rating variable against rental_duration variable in stacked bar plots plot length variable against rental_duration variable in stacked bar plots read payment table plot case distribution of Year Day Month Week and Quarter of payment plot which year month week days of

week and quarter have most payment amount read film list by joining five tables category film_category film_actor film and actor plot case distribution of top 10 and bottom 10 actors plot which film title have least and most sales plot which actor have least and most sales plot which film category have least and most sales plot case distribution of top 10 and bottom 10 overdue costumers plot which customer have least and most overdue days plot which store have most sales plot average payment amount by month with mean and EWM and plot payment amount over June 2005 This project uses the Sakila sample database which is a fictitious database designed to represent a DVD rental store The tables of the database include film film_category actor film_actor customer rental payment and inventory among others You can download the MySQL from <https://dev.mysql.com/doc/sakila/en>

Introduction To Numerical Computation, An (Second Edition) Wen Shen, 2019-08-28 This book serves as a set of lecture notes for a senior undergraduate level course on the introduction to numerical computation which was developed through 4 semesters of teaching the course over 10 years The book requires minimum background knowledge from the students including only a three semester of calculus and a bit on matrices The book covers many of the introductory topics for a first course in numerical computation which fits in the short time frame of a semester course Topics range from polynomial approximations and interpolation to numerical methods for ODEs and PDEs Emphasis was made more on algorithm development basic mathematical ideas behind the algorithms and the implementation in Matlab The book is supplemented by two sets of videos available through the author's YouTube channel Homework problem sets are provided for each chapter and complete answer sets are available for instructors upon request The second edition contains a set of selected advanced topics written in a self contained manner suitable for self learning or as additional material for an honored version of the course Videos are also available for these added topics

Classification and Prediction Projects with Machine Learning and Deep Learning Vivian Siahaan, Rismon Hasiholan Sianipar, 2022-02-06

PROJECT 1 DATA SCIENCE CRASH COURSE Drinking Water Potability Classification and Prediction Using Machine Learning and Deep Learning with Python Access to safe drinking water is essential to health a basic human right and a component of effective policy for health protection This is important as a health and development issue at a national regional and local level In some regions it has been shown that investments in water supply and sanitation can yield a net economic benefit since the reductions in adverse health effects and health care costs outweigh the costs of undertaking the interventions The drinkingwaterpotability csv file contains water quality metrics for 3276 different water bodies The columns in the file are as follows ph Hardness Solids Chloramines Sulfate Conductivity Organic_carbon Trihalomethanes Turbidity and Potability Contaminated water and poor sanitation are linked to the transmission of diseases such as cholera diarrhea dysentery hepatitis A typhoid and polio Absent inadequate or inappropriately managed water and sanitation services expose individuals to preventable health risks This is particularly the case in health care facilities where both patients and staff are placed at additional risk of infection and disease when water sanitation and hygiene services are lacking The machine learning models

used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine Adaboost LGBM classifier Gradient Boosting XGB classifier MLP classifier and CNN 1D Finally you will plot boundary decision ROC distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

PROJECT 2 DATA SCIENCE CRASH COURSE Skin Cancer Classification and Prediction Using Machine Learning and Deep Learning Skin cancer develops primarily on areas of sun exposed skin including the scalp face lips ears neck chest arms and hands and on the legs in women But it can also form on areas that rarely see the light of day your palms beneath your fingernails or toenails and your genital area Skin cancer affects people of all skin tones including those with darker complexions When melanoma occurs in people with dark skin tones it s more likely to occur in areas not normally exposed to the sun such as the palms of the hands and soles of the feet Dataset used in this project contains a balanced dataset of images of benign skin moles and malignant skin moles The data consists of two folders with each 1800 pictures 224x244 of the two types of moles The machine learning models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine Adaboost LGBM classifier Gradient Boosting XGB classifier MLP classifier and CNN 1D The deep learning models used are CNN and MobileNet

THREE PROJECTS: SQL SERVER AND PYTHON GUI FOR DATA ANALYSIS Vivian Siahaan,Rismon Hasiholan Sianipar,2022-11-08

PROJECT 1 FULL SOURCE CODE SQL SERVER FOR STUDENTS AND DATA SCIENTISTS WITH PYTHON GUI In this project we provide you with the SQL SERVER version of SQLite sample database named chinook The chinook sample database is a good database for practicing with SQL especially PostgreSQL The detailed description of the database can be found on <https://www.sqlitetutorial.net/sqlite-sample-database/> The sample database consists of 11 tables The employee table stores employees data such as employee id last name first name etc It also has a field named ReportsTo to specify who reports to whom customers table stores customers data invoices The artist table stores artists data It is a simple table that contains only the artist id and name The album table stores data about a list of tracks Each album belongs to one artist However one artist may have multiple albums The media_type table stores media types such as MPEG audio and AAC audio files genre table stores music types such as rock jazz metal etc The track table stores the data of songs Each track belongs to one album

playlist the distribution of amount by year quarter month week day and hour the bottom top 10 sales by employee the bottom top 10 sales by customer the bottom top 10 sales by customer the bottom top 10 sales by artist the bottom top 10 sales by genre the bottom top 10 sales by play list the bottom top 10 sales by customer city the bottom top 10 sales by customer city the bottom top 10 sales by customer city the payment amount by month with mean and EWM the average payment amount by every month and amount payment in all years

PROJECT 2 FULL SOURCE CODE SQL SERVER FOR DATA ANALYTICS AND VISUALIZATION WITH PYTHON GUI This book uses SQL SERVER version of MySQL based Sakila sample database It is a fictitious database

designed to represent a DVD rental store. The tables of the database include film, film_category, actor, customer, rental, payment, and inventory among others. The Sakila sample database is intended to provide a standard schema that can be used for examples in books, tutorials, articles, samples, and so forth. Detailed information about the database can be found on website <https://dev.mysql.com/doc/index-other.html>. In this project, you will develop GUI using PyQt5 to read SQL SERVER database and every table in it. You will read every actor in actor table, read every film in films table, plot case distribution of film release year, film rating, rental duration, and categorize film length. You will plot rating variable against rental_duration variable in stacked bar plots, plot length variable against rental_duration variable in stacked bar plots, read payment table, plot case distribution of Year, Day, Month, Week, and Quarter of payment, plot which year, month, week, days of week, and quarter have most payment amount, read film list by joining five tables: category, film_category, film_actor, film, and actor, plot case distribution of top 10 and bottom 10 actors, plot which film title have least and most sales, plot which actor have least and most sales, plot which film category have least and most sales, plot case distribution of top 10 and bottom 10 overdue customers, plot which customer have least and most overdue days, plot which store have most sales, plot average payment amount by month with mean and EWM, and plot payment amount over June 2005.

PROJECT 3: ZERO TO MASTERY: THE COMPLETE GUIDE TO LEARNING SQL SERVER AND DATA SCIENCE WITH PYTHON GUI

In this project, we provide you with a SQL SERVER version of an Oracle sample database named OT, which is based on a global fictitious company that sells computer hardware including storage, motherboard, RAM, video card, and CPU. The company maintains the product information such as name, description, standard cost, list price, and product line. It also tracks the inventory information for all products including warehouses where products are available. Because the company operates globally, it has warehouses in various locations around the world. The company records all customer information including name, address, and website. Each customer has at least one contact person with detailed information including name, email, and phone. The company also places a credit limit on each customer to limit the amount that customer can owe. Whenever a customer issues a purchase order, a sales order is created in the database with the pending status. When the company ships the order, the order status becomes shipped. In case the customer cancels an order, the order status becomes canceled. In addition to the sales information, the employee data is recorded with some basic information such as name, email, phone, job title, manager, and hire date. In this project, you will write Python script to create every table and insert rows of data into each of them. You will develop GUI with PyQt5 to each table in the database. You will also create GUI to plot case distribution of order date by year, quarter, month, week, and day; the distribution of amount by year, quarter, month, week, day, and hour; the distribution of bottom 10 sales by product; top 10 sales by product; bottom 10 sales by customer; top 10 sales by customer; bottom 10 sales by category; top 10 sales by category; bottom 10 sales by status; top 10 sales by status; bottom 10 sales by customer; city; top 10 sales by customer; city; bottom 10 sales by customer; state; top 10 sales by customer; state; average amount by month with mean and EWM.

average amount by every month amount feature over June 2016 amount feature over 2017 and amount payment in all years

FOUR PROJECTS: PREDICTION AND FORECASTING USING MACHINE LEARNING WITH PYTHON Vivian

Siahaan,Rismon Hasiholan Sianipar,2022-05-25 PROJECT 1 GOLD PRICE ANALYSIS AND FORECASTING USING MACHINE LEARNING WITH PYTHON The challenge of this project is to accurately predict the future adjusted closing price of Gold ETF across a given period of time in the future The problem is a regression problem because the output value which is the adjusted closing price in this project is continuous value Data for this study is collected from November 18th 2011 to January 1st 2019 from various sources The data has 1718 rows in total and 80 columns in total Data for attributes such as Oil Price Standard and Poor s S Blast Furnace Slag component 2 Fly Ash component 3 Water component 4 Superplasticizer component 5 Coarse Aggregate Fine Aggregate component 7 Age and Concrete compressive strength To perform regression on concrete compressive strength you will use Linear Regression Random Forest regression Decision Tree regression Support Vector Machine regression Na ve Bayes regression K Nearest Neighbor regression Adaboost regression Gradient Boosting regression Extreme Gradient Boosting regression Light Gradient Boosting regression Catboost regression and MLP regression To perform clustering you will use K Means algorithm The machine learning models used predict clusters as target variable are K Nearest Neighbor classifier Random Forest classifier Naive Bayes classifier Logistic Regression classifier Decision Tree classifier Support Vector Machine classifier LGBM classifier Gradient Boosting classifier XGB classifier and MLP classifier Finally you will plot boundary decision distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy PROJECT 4 DATA SCIENCE FOR SALES ANALYSIS FORECASTING CLUSTERING AND PREDICTION WITH PYTHON The dataset used in this project is from Walmart which is a renowned retail corporation that operates a chain of hypermarkets Walmart has provided a data combining of 45 stores including store information and monthly sales The data is provided on weekly basis Walmart tries to find the impact of holidays on the sales of store For which it has included four holidays weeks into the dataset which are Christmas Thanksgiving Super bowl Labor Day In this project you are going to analyze forecast weekly sales perform clustering and predict the resulting clusters The dataset covers sales from 2010 02 05 to 2012 11 01 Following are the attributes in the dataset Store the store number Date the week of sales Weekly_Sales sales for the given store Holiday_Flag whether the week is a special holiday week 1 Holiday week 0 Non holiday week Temperature Temperature on the day of sale Fuel_Price Cost of fuel in the region CPI Prevailing consumer price index and Unemployment Prevailing unemployment rate To perform regression on weekly sales you will use Linear Regression Random Forest regression Decision Tree regression Support Vector Machine regression Na ve Bayes regression K Nearest Neighbor regression Adaboost regression Gradient Boosting regression Extreme Gradient Boosting regression Light Gradient Boosting regression Catboost regression and MLP regression To perform clustering you will use K

Means algorithm The machine learning models used predict clusters as target variable are K Nearest Neighbor classifier Random Forest classifier Naive Bayes classifier Logistic Regression classifier Decision Tree classifier Support Vector Machine classifier LGBM classifier Gradient Boosting classifier XGB classifier and MLP classifier Finally you will plot boundary decision distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

FOUR PROJECTS: MySQL and SQLite For Data Science with Python GUI Vivian Siahaan, Rismon Hasiholan Sianipar, 2022-06-29

PROJECT 1 SQLITE AND DATA SCIENCE QUERIES AND VISUALIZATION WITH PYTHON GUI In this project you will develop GUI with PyQt5 to utilize Push Button Combo Box Table Widget Line Edit and Widget read and create SQLite database and every table in it plot case distribution of film release year film rating rental duration and categorize film length plot rating variable against rental_duration variable in stacked bar plots plot length variable against rental_duration variable in stacked bar plots read payment table plot case distribution of Year Day Month Week and Quarter of payment plot which year month week days of week and quarter have most payment amount read film list by joining five tables category film_category film_actor film and actor plot case distribution of top 10 and bottom 10 actors plot which film title have least and most sales plot which actor have least and most sales plot which film category have least and most sales plot case distribution of top 10 and bottom 10 overdue costumers plot which customer have least and most overdue days plot which store have most sales plot average payment amount by month with mean and EWM and plot payment amount over June 2005 This project uses the Sakila sample database which is a fictitious database designed to represent a DVD rental store The tables of the database include film film_category actor film_actor customer rental payment and inventory among others You can download the SQLite from <https://dev.mysql.com/doc/sakila/en>

PROJECT 2 MYSQL AND DATA SCIENCE QUERIES AND VISUALIZATION WITH PYTHON GUI In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of film release year film rating rental duration and categorize film length plot rating variable against rental_duration variable in stacked bar plots plot length variable against rental_duration variable in stacked bar plots read payment table plot case distribution of Year Day Month Week and Quarter of payment plot which year month week days of week and quarter have most payment amount read film list by joining five tables category film_category film_actor film and actor plot case distribution of top 10 and bottom 10 actors plot which film title have least and most sales plot which actor have least and most sales plot which film category have least and most sales plot case distribution of top 10 and bottom 10 overdue costumers plot which customer have least and most overdue days plot which store have most sales plot average payment amount by month with mean and EWM and plot payment amount over June 2005 This project uses the Sakila sample database which is a fictitious database designed to represent a DVD rental store The tables of the database include

film film_category actor film_actor customer rental payment and inventory among others You can download the MySQL from <https://dev.mysql.com/doc/sakila/en> PROJECT 3 MYSQL FOR DATA ANALYSIS AND VISUALIZATION WITH PYTHON GUI In this project you will use the Northwind database which is a sample database that was originally created by Microsoft and used as the basis for their tutorials in a variety of database products for decades The Northwind database contains the sales data for a fictitious company called Northwind Traders which imports and exports specialty foods from around the world The Northwind database is an excellent tutorial schema for a small business ERP with customers orders inventory purchasing suppliers shipping employees and single entry accounting The Northwind dataset includes sample data for the following Suppliers Suppliers and vendors of Northwind Customers Customers who buy products from Northwind Employees Employee details of Northwind traders Products Product information Shippers The details of the shippers who ship the products from the traders to the end customers Orders and Order_Details Sales Order transactions taking place between the customers the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by supplier top 10 sales by supplier bottom 10 sales by customer country top 10 sales by customer country bottom 10 sales by supplier country top 10 sales by supplier country average amount by month with mean and ewm average amount by every month amount feature over June 1997 amount feature over 1998 and all amount feature PROJECT 4 SQLITE FOR DATA ANALYSIS AND VISUALIZATION WITH PYTHON GUI In this project you will use SQLite version of Northwind database which is a sample database that was originally created by Microsoft and used as the basis for their tutorials in a variety of database products for decades The Northwind database contains the sales data for a fictitious company called Northwind Traders which imports and exports specialty foods from around the world The Northwind database is an excellent tutorial schema for a small business ERP with customers orders inventory purchasing suppliers shipping employees and single entry accounting The Northwind dataset includes sample data for the following Suppliers Suppliers and vendors of Northwind Customers Customers who buy products from Northwind Employees Employee details of Northwind traders Products Product information Shippers The details of the shippers who ship the products from the traders to the end customers Orders and Order_Details Sales Order transactions taking place between the customers the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by supplier top 10 sales by supplier bottom 10 sales by customer country top 10 sales by customer country bottom 10 sales by supplier country top 10 sales by supplier country average amount by month with mean and ewm average amount by every month amount feature over June 1997 amount feature over 1998 and all amount feature **ANALYSIS AND PREDICTION PROJECTS USING MACHINE LEARNING AND DEEP LEARNING WITH PYTHON** Vivian Siahaan,Rismon Hasiholan Sianipar,2022-02-17 PROJECT 1 DEFAULT LOAN PREDICTION BASED ON CUSTOMER

BEHAVIOR Using Machine Learning and Deep Learning with Python In finance default is failure to meet the legal obligations or conditions of a loan for example when a home buyer fails to make a mortgage payment or when a corporation or government fails to pay a bond which has reached maturity A national or sovereign default is the failure or refusal of a government to repay its national debt The dataset used in this project belongs to a Hackathon organized by Univ AI All values were provided at the time of the loan application Following are the features in the dataset Income Age Experience Married Single House_Ownership Car_Ownership Profession CITY STATE CURRENT_JOB_YRS CURRENT_HOUSE_YRS and Risk_Flag The Risk_Flag indicates whether there has been a default in the past or not The machine learning models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine Adaboost LGBM classifier Gradient Boosting XGB classifier MLP classifier and CNN 1D Finally you will plot boundary decision ROC distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy PROJECT 2 AIRLINE PASSENGER SATISFACTION Analysis and Prediction Using Machine Learning and Deep Learning with Python The dataset used in this project contains an airline passenger satisfaction survey In this case you will determine what factors are highly correlated to a satisfied or dissatisfied passenger and predict passenger satisfaction Below are the features in the dataset Gender Gender of the passengers Female Male Customer Type The customer type Loyal customer disloyal customer Age The actual age of the passengers Type of Travel Purpose of the flight of the passengers Personal Travel Business Travel Class Travel class in the plane of the passengers Business Eco Eco Plus Flight distance The flight distance of this journey Inflight wifi service Satisfaction level of the inflight wifi service 0 Not Applicable 1 5 Departure Arrival time convenient Satisfaction level of Departure Arrival time convenient Ease of Online booking Satisfaction level of online booking Gate location Satisfaction level of Gate location Food and drink Satisfaction level of Food and drink Online boarding Satisfaction level of online boarding Seat comfort Satisfaction level of Seat comfort Inflight entertainment Satisfaction level of inflight entertainment On board service Satisfaction level of On board service Leg room service Satisfaction level of Leg room service Baggage handling Satisfaction level of baggage handling Check in service Satisfaction level of Check in service Inflight service Satisfaction level of inflight service Cleanliness Satisfaction level of Cleanliness Departure Delay in Minutes Minutes delayed when departure Arrival Delay in Minutes Minutes delayed when Arrival and Satisfaction Airline satisfaction level Satisfaction neutral or dissatisfaction The machine learning models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine LGBM classifier Gradient Boosting XGB classifier MLP classifier and CNN 1D Finally you will plot boundary decision ROC distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy PROJECT 3 CREDIT CARD CHURNING CUSTOMER ANALYSIS

AND PREDICTION USING MACHINE LEARNING AND DEEP LEARNING WITH PYTHON The dataset used in this project consists of more than 10 000 customers mentioning their age salary marital_status credit card limit credit card category etc There are 20 features in the dataset In the dataset there are only 16 07% of customers who have churned Thus it s a bit difficult to train our model to predict churning customers Following are the features in the dataset Attrition_Flag Customer_Age Gender Dependent_count Education_Level Marital_Status Income_Category Card_Category Months_on_book Total_Relationship_Count Months_Inactive_12_mon Contacts_Count_12_mon Credit_Limit Total_Revolving_Bal Avg_Open_To_Buy Total_Amt_Chng_Q4_Q1 Total_Trans_Amt Total_Trans_Ct Total_Ct_Chng_Q4_Q1 and Avg_Utilization_Ratio The target variable is Attrition_Flag The machine learning models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine LGBM classifier Gradient Boosting XGB classifier MLP classifier and CNN 1D Finally you will plot boundary decision ROC distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

PROJECT 4 MARKETING ANALYSIS AND PREDICTION USING MACHINE LEARNING AND DEEP LEARNING WITH PYTHON

This data set was provided to students for their final project in order to test their statistical analysis skills as part of a MSc in Business Analytics It can be utilized for EDA Statistical Analysis and Visualizations Following are the features in the dataset ID Customer s unique identifier Year_Birth Customer s birth year Education Customer s education level Marital_Status Customer s marital status Income Customer s yearly household income Kidhome Number of children in customer s household Teenhome Number of teenagers in customer s household Dt_Customer Date of customer s enrollment with the company Recency Number of days since customer s last purchase MntWines Amount spent on wine in the last 2 years MntFruits Amount spent on fruits in the last 2 years MntMeatProducts Amount spent on meat in the last 2 years MntFishProducts Amount spent on fish in the last 2 years MntSweetProducts Amount spent on sweets in the last 2 years MntGoldProds Amount spent on gold in the last 2 years NumDealsPurchases Number of purchases made with a discount NumWebPurchases Number of purchases made through the company s web site NumCatalogPurchases Number of purchases made using a catalogue NumStorePurchases Number of purchases made directly in stores NumWebVisitsMonth Number of visits to company s web site in the last month AcceptedCmp3 1 if customer accepted the offer in the 3rd campaign 0 otherwise AcceptedCmp4 1 if customer accepted the offer in the 4th campaign 0 otherwise AcceptedCmp5 1 if customer accepted the offer in the 5th campaign 0 otherwise AcceptedCmp1 1 if customer accepted the offer in the 1st campaign 0 otherwise AcceptedCmp2 1 if customer accepted the offer in the 2nd campaign 0 otherwise Response 1 if customer accepted the offer in the last campaign 0 otherwise Complain 1 if customer complained in the last 2 years 0 otherwise and Country Customer s location The machine and deep learning models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support

Vector Machine LGBM classifier Gradient Boosting XGB classifier MLP classifier and CNN 1D Finally you will plot boundary decision ROC distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

PROJECT 5 METEOROLOGICAL DATA ANALYSIS AND PREDICTION USING MACHINE LEARNING WITH PYTHON

Meteorological phenomena are described and quantified by the variables of Earth's atmosphere temperature air pressure water vapour mass flow and the variations and interactions of these variables and how they change over time Different spatial scales are used to describe and predict weather on local regional and global levels The dataset used in this project consists of meteorological data with 96453 total number of data points and with 11 attributes columns Following are the columns in the dataset Formatted Date Summary Precip Type Temperature C Apparent Temperature C Humidity Wind Speed km/h Wind Bearing degrees Visibility km Pressure millibars and Daily Summary The machine learning models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine LGBM classifier Gradient Boosting XGB classifier and MLP classifier Finally you will plot boundary decision distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

DATA ANALYSIS PROJECTS WITH MYSQL, SQLITE, POSTGRESQL, AND SQL SERVER USING PYTHON GUI Vivian Siahaan, Rismon Hasiholan Sianipar, 2022-10-26

PROJECT 1 FULL SOURCE CODE POSTGRESQL AND DATA SCIENCE FOR PROGRAMMERS WITH PYTHON GUI

This project uses the PostgreSQL version of MySQL based Sakila sample database which is a fictitious database designed to represent a DVD rental store The tables of the database include film film_category actor film_actor customer rental payment and inventory among others You can download the database from <https://dev.mysql.com/doc/sakila/en> In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of film release year film rating rental duration and categorize film length plot rating variable against rental_duration variable in stacked bar plots plot length variable against rental_duration variable in stacked bar plots read payment table plot case distribution of Year Day Month Week and Quarter of payment plot which year month week days of week and quarter have most payment amount read film list by joining five tables category film_category film_actor film and actor plot case distribution of top 10 and bottom 10 actors plot which film title have least and most sales plot which actor have least and most sales plot which film category have least and most sales plot case distribution of top 10 and bottom 10 overdue customers plot which store have most sales plot average payment amount by month with mean and EWM and plot payment amount over June 2005

PROJECT 2 FULL SOURCE CODE MYSQL FOR STUDENTS AND PROGRAMMERS WITH PYTHON GUI

In this project we provide you with a MySQL version of an Oracle sample database named OT which is based on a global fictitious company that sells computer

hardware including storage motherboard RAM video card and CPU The company maintains the product information such as name description standard cost list price and product line It also tracks the inventory information for all products including warehouses where products are available Because the company operates globally it has warehouses in various locations around the world The company records all customer information including name address and website Each customer has at least one contact person with detailed information including name email and phone The company also places a credit limit on each customer to limit the amount that customer can owe Whenever a customer issues a purchase order a sales order is created in the database with the pending status When the company ships the order the order status becomes shipped In case the customer cancels an order the order status becomes canceled In addition to the sales information the employee data is recorded with some basic information such as name email phone job title manager and hire date In this project you will write Python script to create every table and insert rows of data into each of them You will develop GUI with PyQt5 to each table in the database You will also create GUI to plot case distribution of order date by year quarter month week and day the distribution of amount by year quarter month week day and hour the distribution of bottom 10 sales by product top 10 sales by product bottom 10 sales by customer top 10 sales by customer bottom 10 sales by category top 10 sales by category bottom 10 sales by status top 10 sales by status bottom 10 sales by customer city top 10 sales by customer city bottom 10 sales by customer state top 10 sales by customer state average amount by month with mean and EWM average amount by every month amount feature over June 2016 amount feature over 2017 and amount payment in all years

PROJECT 3 ZERO TO MASTERY THE COMPLETE GUIDE TO LEARNING SQLITE AND PYTHON GUI In this project we provide you with the SQLite version of The Oracle Database Sample Schemas that provides a common platform for examples in each release of the Oracle Database The sample database is also a good database for practicing with SQL especially SQLite The detailed description of the database can be found on <http://luna.ext.di.fc.ul.pt/oracle11g/server/112/e10831/diagrams/htm/insertedID0> The four schemas are a set of interlinked schemas This set of schemas provides a layered approach to complexity A simple schema Human Resources HR is useful for introducing basic topics An extension to this schema supports Oracle Internet Directory demos A second schema Order Entry OE is useful for dealing with matters of intermediate complexity Many data types are available in this schema including non scalar data types The Online Catalog OC subschema is a collection of object relational database objects built inside the OE schema The Product Media PM schema is dedicated to multimedia data types The Sales History SH schema is designed to allow for demos with large amounts of data An extension to this schema provides support for advanced analytic processing The HR schema consists of seven tables regions countries locations departments employees jobs and job_histories This book only implements HR schema since the other schemas will be implemented in the next books

PROJECT 4 FULL SOURCE CODE SQL SERVER FOR STUDENTS AND DATA SCIENTISTS WITH PYTHON GUI In this project we provide you with the SQL SERVER version of SQLite sample database named chinook The chinook sample

database is a good database for practicing with SQL especially PostgreSQL The detailed description of the database can be found on <https://www.sqlitetutorial.net/sqlite-sample-database/> The sample database consists of 11 tables The employee table stores employees data such as employee id last name first name etc It also has a field named ReportsTo to specify who reports to whom customers table stores customers data invoices The artist table stores artists data It is a simple table that contains only the artist id and name The album table stores data about a list of tracks Each album belongs to one artist However one artist may have multiple albums The media_type table stores media types such as MPEG audio and AAC audio files genre table stores music types such as rock jazz metal etc The track table stores the data of songs Each track belongs to one album playlist the distribution of amount by year quarter month week day and hour the bottom top 10 sales by employee the bottom top 10 sales by customer the bottom top 10 sales by customer the bottom top 10 sales by artist the bottom top 10 sales by genre the bottom top 10 sales by play list the bottom top 10 sales by customer city the bottom top 10 sales by customer city the bottom top 10 sales by customer city the payment amount by month with mean and EWM the average payment amount by every month and amount payment in all years

Control Engineering in Development Projects Olis Rubin, 2016-03-31 This practical new guide to designing control systems gives readers a virtual experience into the complex engineering problems that may occur during the design and development process This book gives engineers guidance in their journey to obtain a greater understanding of the thought processes involved in designing and developing successful control systems for radar flight control and several other applications This constructive new resource takes engineers through various phases of project development Clear examples and case studies are presented throughout demonstrating various management styles Readers discover a variety of challenges that could occur during actual projects This book represents a unique contribution to the technical literature on control system design by illustrating principles in the language of control engineering with copious figures It presents methodical procedures for setting up simulation models used for integrating controls systems with hardware in order to reduce errors

5 FIVE DATA SCIENCE PROJECTS FOR ANALYSIS, CLASSIFICATION, PREDICTION, AND SENTIMENT ANALYSIS WITH PYTHON GUI

Vivian Siahaan, Rismon Hasiholan Sianipar, 2022-04-29 PROJECT 1 SUPERMARKET SALES ANALYSIS AND PREDICTION USING MACHINE LEARNING WITH PYTHON GUI The dataset used in this project consists of the growth of supermarkets with high market competitions in most populated cities The dataset is one of the historical sales of supermarket company which has recorded in 3 different branches for 3 months data Predictive data analytics methods are easy to apply with this dataset Attribute information in the dataset are as follows Invoice id Computer generated sales slip invoice identification number Branch Branch of supercenter 3 branches are available identified by A B and C City Location of supercenters Customer type Type of customers recorded by Members for customers using member card and Normal for without member card Gender Gender type of customer Product line General item categorization groups Electronic accessories Fashion accessories Food

and beverages Health and beauty Home and lifestyle Sports and travel Unit price Price of each product in Quantity Number of products purchased by customer Tax 5% tax fee for customer buying Total Total price including tax Date Date of purchase Record available from January 2019 to March 2019 Time Purchase time 10am to 9pm Payment Payment used by customer for purchase 3 methods are available Cash Credit card and Ewallet COGS Cost of goods sold Gross margin percentage Gross margin percentage Gross income Gross income and Rating Customer stratification rating on their overall shopping experience On a scale of 1 to 10 In this project you will perform predicting rating using machine learning The machine learning models used in this project to predict clusters as target variable are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine LGBM Gradient Boosting XGB and MLP Finally you will plot boundary decision distribution of features feature importance cross validation score and predicted values versus true values confusion matrix learning curve performance of the model scalability of the model training loss and training accuracy

PROJECT 2 DETECTING CYBERBULLYING TWEETS USING MACHINE LEARNING AND DEEP LEARNING WITH PYTHON GUI As social media usage becomes increasingly prevalent in every age group a vast majority of citizens rely on this essential medium for day to day communication Social media s ubiquity means that cyberbullying can effectively impact anyone at any time or anywhere and the relative anonymity of the internet makes such personal attacks more difficult to stop than traditional bullying On April 15th 2020 UNICEF issued a warning in response to the increased risk of cyberbullying during the COVID 19 pandemic due to widespread school closures increased screen time and decreased face to face social interaction The statistics of cyberbullying are outright alarming 36 5% of middle and high school students have felt cyberbullied and 87% have observed cyberbullying with effects ranging from decreased academic performance to depression to suicidal thoughts In light of all of this this dataset contains more than 47000 tweets labelled according to the class of cyberbullying Age Ethnicity Gender Religion Other type of cyberbullying and Not cyberbullying The data has been balanced in order to contain 8000 of each class The models used in this project are K Nearest Neighbor Random Forest Naive Bayes Logistic Regression Decision Tree Support Vector Machine Adaboost LGBM classifier Gradient Boosting XGB classifier LSTM and CNN Three feature scaling used in machine learning are raw minmax scaler and standard scaler Finally you will develop a GUI using PyQt5 to plot cross validation score predicted values versus true values confusion matrix learning curve decision boundaries performance of the model scalability of the model training loss and training accuracy

PROJECT 3 HIGHER EDUCATION STUDENT ACADEMIC PERFORMANCE ANALYSIS AND PREDICTION USING MACHINE LEARNING WITH PYTHON GUI The dataset used in this project was collected from the Faculty of Engineering and Faculty of Educational Sciences students in 2019 The purpose is to predict students end of term performances using ML techniques Attribute information in the dataset are as follows Student ID Student Age 1 18 21 2 22 25 3 above 26 Sex 1 female 2 male Graduated high school type 1 private 2 state 3 other Scholarship type 1 None 2 25% 3 50% 4 75% 5 Full Additional work 1 Yes 2 No

Regular artistic or sports activity 1 Yes 2 No Do you have a partner 1 Yes 2 No Total salary if available 1 USD 135 200 2 USD 201 270 3 USD 271 340 4 USD 341 410 5 above 410 Transportation to the university 1 Bus 2 Private car taxi 3 bicycle 4 Other Accommodation type in Cyprus 1 rental 2 dormitory 3 with family 4 Other Mother s education 1 primary school 2 secondary school 3 high school 4 university 5 MSc 6 Ph D Father s education 1 primary school 2 secondary school 3 high school 4 university 5 MSc 6 Ph D Number of sisters brothers if available 1 1 2 2 3 3 4 4 5 5 or above Parental status 1 married 2 divorced 3 died one of them or both Mother s occupation 1 retired 2 housewife 3 government officer 4 private sector employee 5 self employment 6 other Father s occupation 1 retired 2 government officer 3 private sector employee 4 self employment 5 other Weekly study hours 1 None 2

Immerse yourself in the artistry of words with Crafted by is expressive creation, **Matlab Projects For Engineering Students** . This ebook, presented in a PDF format (PDF Size: *), is a masterpiece that goes beyond conventional storytelling. Indulge your senses in prose, poetry, and knowledge. Download now to let the beauty of literature and artistry envelop your mind in a unique and expressive way.

https://staging.conocer.cide.edu/book/detail/Download_PDFS/lakefront_airport_new_orleans.pdf

Table of Contents Matlab Projects For Engineering Students

1. Understanding the eBook Matlab Projects For Engineering Students
 - The Rise of Digital Reading Matlab Projects For Engineering Students
 - Advantages of eBooks Over Traditional Books
2. Identifying Matlab Projects For Engineering Students
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Matlab Projects For Engineering Students
 - User-Friendly Interface
4. Exploring eBook Recommendations from Matlab Projects For Engineering Students
 - Personalized Recommendations
 - Matlab Projects For Engineering Students User Reviews and Ratings
 - Matlab Projects For Engineering Students and Bestseller Lists
5. Accessing Matlab Projects For Engineering Students Free and Paid eBooks
 - Matlab Projects For Engineering Students Public Domain eBooks
 - Matlab Projects For Engineering Students eBook Subscription Services
 - Matlab Projects For Engineering Students Budget-Friendly Options

6. Navigating Matlab Projects For Engineering Students eBook Formats
 - ePub, PDF, MOBI, and More
 - Matlab Projects For Engineering Students Compatibility with Devices
 - Matlab Projects For Engineering Students Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Matlab Projects For Engineering Students
 - Highlighting and Note-Taking Matlab Projects For Engineering Students
 - Interactive Elements Matlab Projects For Engineering Students
8. Staying Engaged with Matlab Projects For Engineering Students
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Matlab Projects For Engineering Students
9. Balancing eBooks and Physical Books Matlab Projects For Engineering Students
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Matlab Projects For Engineering Students
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Matlab Projects For Engineering Students
 - Setting Reading Goals Matlab Projects For Engineering Students
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Matlab Projects For Engineering Students
 - Fact-Checking eBook Content of Matlab Projects For Engineering Students
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
 - Integration of Multimedia Elements

- Interactive and Gamified eBooks

Matlab Projects For Engineering Students Introduction

Free PDF Books and Manuals for Download: Unlocking Knowledge at Your Fingertips In today's fast-paced digital age, obtaining valuable knowledge has become easier than ever. Thanks to the internet, a vast array of books and manuals are now available for free download in PDF format. Whether you are a student, professional, or simply an avid reader, this treasure trove of downloadable resources offers a wealth of information, conveniently accessible anytime, anywhere. The advent of online libraries and platforms dedicated to sharing knowledge has revolutionized the way we consume information. No longer confined to physical libraries or bookstores, readers can now access an extensive collection of digital books and manuals with just a few clicks. These resources, available in PDF, Microsoft Word, and PowerPoint formats, cater to a wide range of interests, including literature, technology, science, history, and much more. One notable platform where you can explore and download free Matlab Projects For Engineering Students PDF books and manuals is the internet's largest free library. Hosted online, this catalog compiles a vast assortment of documents, making it a veritable goldmine of knowledge. With its easy-to-use website interface and customizable PDF generator, this platform offers a user-friendly experience, allowing individuals to effortlessly navigate and access the information they seek. The availability of free PDF books and manuals on this platform demonstrates its commitment to democratizing education and empowering individuals with the tools needed to succeed in their chosen fields. It allows anyone, regardless of their background or financial limitations, to expand their horizons and gain insights from experts in various disciplines. One of the most significant advantages of downloading PDF books and manuals lies in their portability. Unlike physical copies, digital books can be stored and carried on a single device, such as a tablet or smartphone, saving valuable space and weight. This convenience makes it possible for readers to have their entire library at their fingertips, whether they are commuting, traveling, or simply enjoying a lazy afternoon at home. Additionally, digital files are easily searchable, enabling readers to locate specific information within seconds. With a few keystrokes, users can search for keywords, topics, or phrases, making research and finding relevant information a breeze. This efficiency saves time and effort, streamlining the learning process and allowing individuals to focus on extracting the information they need. Furthermore, the availability of free PDF books and manuals fosters a culture of continuous learning. By removing financial barriers, more people can access educational resources and pursue lifelong learning, contributing to personal growth and professional development. This democratization of knowledge promotes intellectual curiosity and empowers individuals to become lifelong learners, promoting progress and innovation in various fields. It is worth noting that while accessing free Matlab Projects For Engineering Students PDF books and manuals is convenient and cost-effective, it is vital to respect copyright laws and intellectual property rights. Platforms offering free

downloads often operate within legal boundaries, ensuring that the materials they provide are either in the public domain or authorized for distribution. By adhering to copyright laws, users can enjoy the benefits of free access to knowledge while supporting the authors and publishers who make these resources available. In conclusion, the availability of Matlab Projects For Engineering Students free PDF books and manuals for download has revolutionized the way we access and consume knowledge. With just a few clicks, individuals can explore a vast collection of resources across different disciplines, all free of charge. This accessibility empowers individuals to become lifelong learners, contributing to personal growth, professional development, and the advancement of society as a whole. So why not unlock a world of knowledge today? Start exploring the vast sea of free PDF books and manuals waiting to be discovered right at your fingertips.

FAQs About Matlab Projects For Engineering Students Books

What is a Matlab Projects For Engineering Students PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. **How do I create a Matlab Projects For Engineering Students PDF?** There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. **How do I edit a Matlab Projects For Engineering Students PDF?** Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. **How do I convert a Matlab Projects For Engineering Students PDF to another file format?** There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. **How do I password-protect a Matlab Projects For Engineering Students PDF?** Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. **How do I compress a PDF file?** You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share

and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Matlab Projects For Engineering Students :

lakefront airport new orleans

ladera norte

lady persuaders

lancelot a novel

lady scandal

ladybug ladybug where are you

labyrinthbones nameleb detective2 stories in 1

lady trues gate

lakota language 2

land conservation financing

lady gregory the woman behind the irish renaissance

~~land and people a world geography teachers annotated edition~~

lady of drawbridge court

lancelot and guenevere

lady franklins revenge

Matlab Projects For Engineering Students :

solutions teacher s site teaching resources oxford - Dec 29 2022

web download the solutions workbook keys for elementary pre intermediate intermediate upper intermediate and advanced

intermediate solutions oxford university press - Aug 05 2023

web nov 5 2023 solutions intermediate 2nd edition grammar speaking english workbook audio 60mb zip get ready for matura 2015 pdf 1mb

audio solutions oxford university press - Apr 01 2023

web 1 02 solutions intermediate third edition 1 03 solutions intermediate third edition 1 04 solutions intermediate third edition 1 05 solutions intermediate third edition 1 06 solutions intermediate third edition 1 07 solutions intermediate third edition 1 08 solutions intermediate third edition 1 09 solutions intermediate third edition

solutions intermediate 3rd edition solutions 3rd edition - Oct 27 2022

web nov 22 2017 tim falla paul a davis solutions intermediate 3rd ed oxford university press 2017 with 100 new content the third edition of oxford s best selling secondary course offers the tried and trusted solutions methodology alongside fresh and diverse material that will spark your students interest and drive them to succeed

solutions intermediate grammar oxford university press - Jul 04 2023

web solutions intermediate grammar select an exercise below unit 1 exercise 1 past tense contrast unit 1 exercise 2 used to unit 2 exercise 1 past simple and present perfect contrast unit 2 exercise 2 present perfect continuous unit 3 exercise 1 speculating and predicting

solutions intermediate teenagers oxford university press - Jul 24 2022

web a new refreshed edition of the five level english course for teenagers with a clear structure supported approach to speaking practice and exam preparation still at its heart part of solutions language level intermediate b1 b2 solutions has been thoroughly modernized with 80 new content to draw in students embed the grammar and

solutions intermediate test bank sciarium - May 22 2022

web feb 6 2018 students website with 100 new content the third edition of oxford s best selling secondary course offers the tried and trusted solutions methodology alongside fresh and diverse material that will spark your students interest and drive them to succeed

solutions intermediate 3rd edition audio ВКонтакте - Apr 20 2022

web aug 13 2020 solutions intermediate 3rd edition audio elt oup com student solutions int3rdedition audio cc kz sellanguage en mode hub solutions

solutions learning resources oxford university press - Oct 07 2023

web solutions third edition select your level elementary pre intermediate intermediate upper intermediate advanced intermediate plus spain only

solutions intermediate student s book sciarium - Aug 25 2022

web nov 8 2017 with 100 new content the third edition of oxford s best selling secondary course offers the tried and trusted solutions methodology alongside fresh and diverse material that will spark your students interest and drive them to solutions intermediate class audio cd1 cd2 3rd edition tim falla paul a davis

intermediate 3rd edition solutions oxford university press - Sep 06 2023

web solutions intermediate 3rd edition grammar workbook audio intermediate wordlist 2 7mb pdf

solutions 3rd edition intermediate student s book solutions - Feb 28 2023

web solutions 3rd edition intermediate student s book solutions third edition falla tim davies paul a amazon com tr kitap

solutions intermediate student s book oxford university press - May 02 2023

web the solutions student s book is packed full of interesting content to keep students of all abilities fully engaged and motivated each unit consists of eight lessons all of which focus on a particular skill including vocabulary grammar reading speaking and writing

solutions intermediate 3rd edition student s book youtube - Feb 16 2022

web may 14 2022 00 00 exam skills trainer 1 track 1 1704 00 exam skills trainer 2 track 1 3606 40 exam skills trainer 3 track 2 2308 22 exam skills trainer 4 track 3

solutions intermediate student s book oxford university press - Nov 27 2022

web solutions intermediate student s book second edition format paperback the solutions student s book is bursting with interesting teen appropriate texts and topics that will engage your students the clear one page per lesson structure of solutions makes it an easy to use course and the supported approach to speaking writing and exam practice

solutions intermediate student s book 3rd edition - Mar 20 2022

web solutions intermediate student s book 3rd edition with 100 new content the third edition of oxford s best selling secondary course offers the tried and trusted solutions methodology alongside fresh and diverse material that will spark your students interest and drive them to succeed

solutions intermediate teenagers oxford university press - Jan 30 2023

web paul a davies tim falla with 100 new content the third edition of oxford s best selling secondary course offers the tried and trusted solutions methodology alongside fresh and diverse material that will spark your students interest

solutions intermediate student s book and online practice pack - Jun 03 2023

web each unit consists of eight lessons all of which focus on a particular skill including vocabulary grammar reading speaking and writing the online practice component of solutions offers an array of digital resources videos vlogs and interactive elements in order to bring the topics to life

solutions intermediate 3ed sb flipbuilder - Jun 22 2022

web share and download solutions intermediate 3ed student book for free upload your pdf on flipbuilder and create a flip pdf like solutions intermediate 3ed student book solutions intermediate 3ed student book flip pdf flipbuilder

solutions intermediate 3rd alleng org - Sep 25 2022

web solutions intermediate 3rd 3rd edition oxford university press with 100 new content the third edition of oxford s best selling secondary course offers the tried and trusted solutions methodology alongside fresh and diverse material that will spark your students interest and drive them to succeed

pdf public procurement best practice guide public procurement - Jan 15 2023

web public procurement best practice guide public procurement directorate mohamed kamara the previous chapter chapter 2 of this guide presented guidelines to assist contracting authorities in making decisions on strategic choices regarding public procurement issues see full pdf download pdf related papers transparency

a practical guide to public procurement amazon com - Jun 08 2022

web mar 26 2015 a practical guide to public procurement 1st edition kindle edition by abby semple author mark cook editor contributor format kindle edition 5 ratings isbn 13 978 0198716112 isbn 10 0198716117 why is isbn important share embed add to book club not in a club learn more kindle 143 10 paperback 150 63 other

[a practical guide to public procurement amazon com](#) - Jul 21 2023

web jun 1 2015 how can public contracts be used effectively to achieve the broader aims of government increasingly emphasis is placed on strategic aspects of public procurement such as value for money competition environmental sustainability and social value

a practical guide to public procurement lexisnexis canada - Jun 20 2023

web jul 9 2018 a practical guide to public procurement a step by step reference to help you understand the public procurement process with useful pointers for developing winning proposals by allan s cutler author publisher lexisnexis canada publication language english book 150 00 quantity softcover 280 pages buy now in stock

a practical guide to public procurement paperback amazon co uk - May 19 2023

web buy a practical guide to public procurement illustrated by semple abby isbn 9780198716112 from amazon s book store everyday low prices and free delivery on eligible orders

practical guide responsible business - Jan 03 2022

web practical guide to transparency in procurement august 2019 spectrum of transparency buyers are grappling with how to integrate social and environmental responsibility into purchasing decisions the most efficient way is to assess a consistent set of publicly available indicators by which companies report their

a practical guide to public procurement goodreads - Apr 18 2023

web jun 1 2015 a practical guide to public procurement abby semple mark cook editor 0 00 0 ratings0 reviews how can public contracts be used effectively to achieve the broader aims of government increasingly emphasis is placed on strategic aspects of public procurement such as value for money competition environmental sustainability

[positioning public procurement as a procedural tool for](#) - May 07 2022

web jul 15 2021 positioning public procurement as a proc policy and society volume 40 2021 issue 3 procedural policy tools in theory and practice open access 2 161 views 1 crossref citations to date 0 altmetric listen original research article

positioning public procurement as a procedural tool for innovation an empirical

public procurement a practical guide to challenging public - Aug 10 2022

web procurement functions have been transferred to the office of government procurement challenges to such procedures are subject to general principles of judicial review and contract law this guide focuses on the special procedure for challenging decisions under eu public procurement rules grounds for challenge

a practical guide to public procurement paperback amazon ca - Nov 13 2022

web apr 26 2016 a practical guide to public procurement semple abby cook mark 9780198716112 public affairs amazon canada skip to main content ca hello select your address books

a practical guide to public procurement softcover abebooks - Sep 11 2022

web increasingly emphasis is placed on strategic aspects of public procurement such as value for money competition environmental sustainability and social value the 2014 eu procurement directives offer a new framework in which to pursue these objectives significantly expanding upon the possibilities under earlier directives

practical guide to public procurement open library - Mar 17 2023

web sep 21 2020 practical guide to public procurement by mark cook and abby semple 0 ratings 0 want to read 0 currently reading 0 have read this edition doesn't have a description yet can you add one publish date 2015 publisher oxford university press language english pages 288 subjects

[a guide to practical procurement google books](#) - Feb 04 2022

web dec 31 2020 practical procurement walks you through the procurement and contract management cycle from early planning considerations and market assessment options to post contract evaluation and

[curbing corruption in public procurement a practical guide](#) - Apr 06 2022

web curbing corruption in public procurement a practical guide 7 procurement processes are also vulnerable to collusion that is secret agreements between parties in the public and or private sector to conspire to commit actions aimed to deceive or commit fraud with the objective of illicit financial gain 8 collusion between government

public procurement theory practices and tools springerlink - Jul 09 2022

web jun 15 2023 leentje volker explains the complexity of public procurement and how it contributes to public value creation inspires the next generation of procurement professionals to become change agents and lead public procurement grounds public procurement theory in real world examples offering implications and tools for practice

communication and guidance internal market industry - Mar 05 2022

web 2019 guidance on the participation of third country bidders and goods in the eu procurement market this guidance document facilitates the understanding of some practical aspects of public procurement procedures in the eu when dealing with third country participation in tenders

a practical guide to public procurement google books - Aug 22 2023

web a practical guide to public procurement abby semple google books how can public contracts be used effectively to achieve the broader aims of government increasingly emphasis is placed on

new practical guidance to help public buyers integrate social - Oct 12 2022

web may 27 2021 this second edition of buying social a guide to taking account of social considerations in public procurement provides practical indications for public buyers to consider the social impact of the goods services and works they purchase the guide is updated to reflect the changes brought about by the 2014 eu directives on public

a practical guide to public procurement ebook amazon co uk - Dec 14 2022

web a practical guide to public procurement 1st edition kindle edition by abby semple author mark cook editor contributor format kindle edition 4 3 5 ratings see all formats and editions kindle edition 110 42 read with our free app paperback 123 39 other new and used from 123 39

a practical guide to public procurement overdrive - Feb 16 2023

web feb 5 2021 in a practical guide to public procurement allan s cutler leverages his decades of experience in public procurement to shed light on the practice and procedure related to the bidding process and offer valuable insight and guidance end to end direction

[how plants grow lesson plan education com](#) - Jan 11 2023

planting seeds theme for preschool there are so many seeds and items to grow in the classroom this planting seeds theme page is filled with preschool activities and ideas for

gardening lesson plans for preschool eylf resources twinkl - Oct 08 2022

pre k literacy plants are all around us unit overview students will explore plants including their attributes and growth cycle over the course of one month or longer

25 planting and gardening activities for - Nov 09 2022

feb 23 2023 looking for creative plant life cycle activities we have 27 fun and free teaching ideas including videos hands on experiments printables and more your students will love

plant activities for preschoolers little bins for little - Jun 16 2023

review the steps of how a seed is planted show students the worksheet called plant life cycle and review the proper steps

download to read more in this lesson students will learn about
lesson plan on plants for kindergarten preschooltalk com - Oct 28 2021

pre k literacy plants are all around us scbores org - Mar 01 2022

plants and seeds activities and lesson plans for pre - Jul 17 2023

apr 21 2022 hi budding botanist here are 40 plant activities for preschoolers and toddlers no worksheets just sensory rich hands on learning

plant activities for preschool pre k and kindergarten - Mar 13 2023

this lesson plan unit with activities for preschool themes of flowers and trees includes over 20 lesson plans for you to use in your home or classroom the downloadable unit contains a

planting growing seeds in the preschool classroom lesson - Jul 05 2022

dec 26 2022 these garden theme preschool lesson plans feature sixteen creative ways to teach gardening to preschoolers even if you dont have access to a garden all the ideas in

preschool homeschool curriculum plants lesson plan - Jan 31 2022

40 hands on plant activities for prek toddlers no worksheets - Feb 12 2023

sep 16 2010 are you looking for a pre k planting seeds lesson plan this article includes circle time ideas recommended books songs and activities and instructions for planting

garden lesson plans for preschool preschooltalk com - Nov 28 2021

27 plant life cycle activities free and creative teaching ideas - Apr 02 2022

lesson plans kidsgardening - Dec 10 2022

root stem flower leaf in this hands on science lesson your students will create their own plants to help them identify and remember the parts of a plant

planting seeds theme for preschool - Jun 04 2022

november 26 2022 by emma d plant worksheets for preschoolers ms cobb s kinder corner kindergarten science lesson on the leaves of plants there were lots of awesome freebies

28 kid friendly plant activities for preschool learners - Apr 14 2023

may 3 2020 today we are offering free lesson plans for preschool that focus on helping young students learn all about how plants grow grab these free preschool garden lesson plans all

free garden preschool lesson plans stay at home educator - Sep 07 2022

jun 27 2015 preschool homeschool curriculum plants lesson plan 8 years ago objective to learn about plants message plants are living things that need light and water and that

gardening and plant theme for preschool little - Aug 18 2023

science plant activities for pre k preschool and kindergarten exploring seeds grab some seed packets from the dollar store and explore seeds with your students i got 2 packs of each

preschool plants mrs plemons kindergarten - May 15 2023

encourage your children to discuss their own experience outside of preschool with gardening don t forget these gardening lesson plans for preschool are here to also help you we know

parts of a plant lesson plan education com - May 03 2022

free week long plants themed preschool lesson plans - Sep 19 2023

jun 15 2020 looking for plant themed preschool lesson plans check out these free plans with a week s worth of plant themed crafts and activities it s all done for you and free to print

browse preschool lesson plans education com - Dec 30 2021

flower and tree theme preschool lesson plans life over c s - Aug 06 2022

search preschool lesson plans chicka chicka boom boom order in the room plant life cycle pumpkins let s eat healthy order in the room browse preschool lesson plans