Data Science (Python)Final Project

Project 1: Real Estate Price Prediction

Develop a predictive model to accurately forecast real estate prices in a given region, considering various influencing factors such as property characteristics, location, market trends, and economic indicators?

The objective of this project is to develop a robust machine learning model that can accurately predict real estate prices based on a comprehensive dataset of property features, market conditions, and economic indicators. By identifying the most significant predictors and optimizing model performance, aim to provide valuable insights for real estate professionals, investors, and policymakers.

Project 2: Send Automatic Emails and Password Authentication using Python

2.1 Send Automatic Emails using Python

Content

Every time you register on a new app, you automatically receive a welcome message with your name on it. If you want to learn how to send such emails automatically, then this article is for you.
You will automatically send a welcome message to the newly registered user. For this task, you must first generate a google app password for your Gmail account.

Once you've generated your Google app password, you can start the task of sending emails using Python by writing the logic for code.

Expectations

i. Import the necessary libraries

ii. Create a function then inside the function perform all operations necessary e.g. (prompting user to enter email and name, think of SMTP and how it is used, etc). Also draft the exact message that you want to send.
iii. Lastly call your function. The function call should return a message like "your email has been sent to 'name'

Expected output

```
auto_email()

 Please Enter Your Name: Ezekiel
Please Enter Your Email: mosezekiel01@gmail.com
Your email has been sent to Ezekiel
```

2.2 Password Authentication using Python

Content:

Password Authentication is the process of checking the identity of a user. Almost every online platform today makes sure that they only give access to the real user which can be only possible by asking for a password while a user wants to log in to the account

To create a password authentication system using Python you have to follow the steps mentioned below:

i. Create a dictionary of usernames with their passwords.
ii. Then you have to ask for user input as the username by using the input function in Python.
iii. Then you have to use the getpass module in Python to ask for user input as the password. Here we are using the getpass module instead of the input function to make sure that the user doesn't get to see what he/she write in the password field.

Expected output

```
Please Enter your password: ••••••••
Authentication successful! You are loged in as, mose

[ ]:
```

Project 3: Electricity Price Prediction ML model

The price of electricity depends on many factors. Predicting the price of electricity helps many businesses understand how much electricity they have to pay each year. The Electricity Price Prediction task is based on a case study where you need to predict the daily price of electricity based on the daily consumption of heavy machinery used by businesses.

Part 1: For this project you will build a Machine learning model, but be sure to follow all the necessary steps from data analysis, data exploration up to testing the model accuracy.

Part 2: Using streamlit libraly, build a simple web interface to do the predictions, give a screenshot of your web interface showing all the entries, the button and the predicted output.

Good Luck...!!