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Where Data Meets Intelligence

INTERNSHIP PROGRAM

Machine Learning

Task 1

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Task: Predict Restaurant Ratings

- **Objective: Build a machine learning model to predict the aggregate rating of a restaurant based on other features.**

- **Steps:**

  - **Preprocess the dataset by handling missing values, encoding categorical variables, and splitting the data into training and testing sets.**
  - **Select a regression algorithm (e.g., linear regression, decision tree regression) and train it on the training data.**
  - **Evaluate the model's performance using appropriate regression metrics (e.g., mean squared error, R-squared) on the testing data.**
  - **Interpret the model's results and analyze the most influential features affecting restaurant ratings.**

Task 2

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Task: Restaurant Recommendation

- **Objective: Create a restaurant recommendation system based on user preferences.**

- **Steps:**
  - **Preprocess the dataset by handling missing values and encoding categorical variables.**
  - **Determine the criteria for restaurant recommendations (e.g., cuisine preference, price range).**
  - **Implement a content-based filtering approach where users are recommended restaurants similar to their preferred criteria.**
  - **Test the recommendation system by providing sample user preferences and evaluating the quality of recommendations.**

Task 3

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Task: Cuisine Classification

- **Objective: Develop a machine learning model to classify restaurants based on their cuisines.**

- **Steps:**

  - **Preprocess the dataset by handling missing values and encoding categorical variables.**
  - **Split the data into training and testing sets.**
  - **Select a classification algorithm (e.g., logistic regression, random forest) and train it on the training data.**
  - **Evaluate the model's performance using appropriate classification metrics (e.g., accuracy, precision, recall) on the testing data.**
  - **Analyze the model's performance across different cuisines and identify any challenges or biases.**

Task 4

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Task: Location-based Analysis

- **Objective: Perform a geographical analysis of the restaurants in the dataset.**

- **Steps:**

  - **Explore the latitude and longitude coordinates of the restaurants and visualize their distribution on a map.**
  - **Group the restaurants by city or locality and analyze the concentration of restaurants in different areas.**
  - **Calculate statistics such as the average ratings, cuisines, or price ranges by city or locality.**
  - **Identify any interesting insights or patterns related to the locations of the restaurants.**

How to Contact Us?

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