Project Proposal

Project Name: Restaurant Analysis

PROJECT DESCRIPTION (< 150 words)

The goal of this project is to build a data analysis system for restaurants using Python. The system will collect data from Yelp or Google Maps API and store it in a database. The collected data will be analyzed using NumPy or Pandas to extract valuable insights such as the most popular types of cuisine, busiest times of day/week, average ratings. The results will be visualized using plots or a GUI to provide a user-friendly interface for the end-user.

SOLUTION (Deliverables). Write a bullet point list of what you expect your software will achieve. I do not hold you to this list for your end-product.

- Collect data on restaurants from Yelp or Google Maps API and store it in a database
- Use NumPy or Pandas to analyze the data and provide insights on:
  - Most popular types of cuisine
  - Busiest times of day/week
  - Average ratings
- Visualize the results with plots or a GUI
- Provide a user-friendly interface for the end-users to interact with the results

DATASETS (if any used).

Restaurant data will be collected from Yelp or Google Maps API. The datasets will include information such as restaurant names, locations, ratings, reviews, cuisines, and opening/closing hours.

Expected Tools (Cloud DBs, Hardware, & Python Libraries to be used.

Python libraries such as NumPy, Pandas, Matplotlib, and PyQt for data analysis, visualization, and GUI development

Rough Timeline (Fill in the columns):

Weeks	**Project Task Timeline**
15th March - 21st March	1. Collect data from Yelp or Google Maps API and store it in a database 2. Familiarize with NumPy and Pandas libraries
22nd March - 28th March	1. Use NumPy or Pandas to find the most popular types of cuisine and busiest times of day/week 2. Begin designing the GUI or plots for visualization
29th March - 4th April	1. Use NumPy or Pandas to find average ratings 2. Continue working on GUI or plots for visualization 3. Test the software on a small subset of the data
5th April - 11th April	1. Implement the finalized visualization method 2. Further test and debug the software 3. Begin working on the user-friendly interface for the end-users to interact with the results
12th April - 18th April	1. Finalize the user interface design 2. Integrate the user interface with the existing software 3. Test and debug the software with the new interface
19th April - 30th April	1. Finalize the project deliverables 2. Prepare for the final presentation