DSCI-551 ChatDB Project:

Trader John's Database Chatbot

Team ChatDB 58:

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Implementation

- Tech stack used for implementation
    - pandas
    - python-dotenv
    - python-telegram-bot
    - pymysql
    - pymongo
- What is your plan to implement query syntax?
    - Our plan is to implement query syntax by giving a limit format to user inputting their query.
- What databases do you choose to use?
    - MySQL and MongoDB

Planned Implementation

- Apply the methodologies learned in class and through online resources to use Python for the following purposes: establishing integration between two different types of databases (MySQL and MongoDB) and a Telegram bot and making it easy to retrieve and manipulate data from these databases.
- Enable the Telegram bot to accurately identify specific patterns within users' natural language input, thereby implementing the example query functionality.

- Enhance the Telegram bot's capabilities to respond to inquiries using natural language, generate example queries in programmatic form, and explain each query's functionality in the responses.

Status of the project

- The basic setup of the Telegram bot is complete. It can receive and respond to user messages, but database integration hasn’t been implemented yet.
- Next step: Integrate the bot with a database, enabling it to receive and store CSV and JSON files.

Challenges

- Uncertainty about how to process natural language in the Telegram bot and convert it into SQL queries.
- Determining the number and types of aggregations (e.g., SUM, AVG, COUNT, etc.) to implement for this project.

Timeline

Milestone/Checkpoint	**Date**	**Tasks**
Project Proposal Submission	September 23	Submit project proposal
Checkpoint 1	October 11	Set up MySQL database
Midterm Progress Report	October 18	Complete basic MySQL database structure

Checkpoint 2	November 19	Build MongoDB database Start developing a Telegram bot Prepare for presentation
In-class Demo	November 26	Demo in class
Checkpoint 3	December 6	Final editing Refine based on feedback
Final Report	December 13	Submit final report