Project Overview

Project Title: FBKaizo AI

Problem Statement: This project relates to player experience for a game called “Yu-Gi-Oh The Falsebound Kingdom”. Currently, players need to navigate an excel document for their one stop shop of monster information. However, this source requires people to know how to navigate excel sheets efficiently or suffer losing a lot of time trying to find the information that they need. Unfortunately, not everyone can navigate excel sheets efficiently and can get lost in the sea of data.

Objectives and Goals: This project is meant to supplement the experiences of both casual and competitive players of the game. Casual players will be able to ask the AI questions about monsters in the game. This will improve their interactive experience and not need to look at excel sheets for long periods on end. This AI will also aid the experience of competitive players who currently need smoother processes to do their mass amount of research, even for those who do know how to navigate excel sheets well. This project will supplement all types of players for smoother experiences on both the casual and competitive side.

Scope and Use Case

Target Audience: Casual and Competitive players for Yu-Gi-Oh The Falsebound Kingdom

Use Case Scenarios: This project would ideally be used in a scenario where someone is trying to learn more about the game. This can be for reasons such as the player not knowing what a monster can do, competitive players needing a summarized list of specific data, or maybe the player just doesn’t like excel documents.

Project Constraints: Limited Information. The information we cover in this AI will be strictly based on the stats and skills of the monsters rather than contain information on the overall game. So for example, the AI won’t know what items are in shops within the game and cannot tell you where to recruit monsters for casual players.

Data Requirements

Data Sources: Data will come from an excel document, put together by the game’s community, that contains all the relevant data needed. We will be using strictly the “Monster List (FBKaizo)” sheet of this document for project goals.

Data:https://docs.google.com/spreadsheets/d/1II05Gkfgh4mkVTZ2ozaMvYJdfJ-Wq7xkwkL0L1BRmC4/edit?usp=sharing

Data Processing Needs: Data will need to be explained to the Model in a reorganized structure so it can understand the data. *Will need to learn how model processes and learns data before implementation. (LLM Recommended: llama (each ver. Has its own strengths and weaknesses), GPT, autogen)

- Challenge: Take first two rows of data and see if the model will understand the information after knowing what game it relates to.

Data Labelling: Data is already accurately labeled and no changes need to be made.

Model Selection

Model Type: Gemini-2.5-Flash
Model Justification: Gemini-2.5-Flash is a cost-effective and fast model, making it ideal for real-time AI that answers Yu-Gi-Oh! card queries. It handles complex card text, archetype mechanics, and game rules with high accuracy. While not as advanced as GPT-4, it performs well for the vast majority of user questions. Its balance of speed, affordability, and language understanding makes it a practical choice for this application.

Project Timeline and Milestones

Timeline:

- **Week 1:** Define project roles and educate team on data
- **Week 2:** Prepare for model training by determining what information will be used for Training Sets, Validation Sets, and Test Sets. Explain data to LLM as well.
- **Week 3:** Pre-train and fine tune the model based on the sets established
- **Week 4:** Integrate necessary API's and refine the structure of information given to the user
- **Week 5:** Build out Frontend UI. Make sure Backend, Model, and Database are connected. Connect Frontend to Backend with Model.
- **Week 6:** Testing, Debugging, and Refinement. Field test in controlled environment. Improve accuracy as needed.
- **Week 7:** Deploy Application. Presentation preparation and final tweaks.
- **Week 8:** Presentation Week.

Milestones:

- **End of Week 5:** Model is trained, pipelines are in process, and ready for implementation.
- **End of Week 6:** Application is fully built out and fully debugged.
- **End of Week 7:** Application deployed with high accuracy and minimal to no bugs.
- **End of Week 8:** Successful presentation and job offers pour in.

Evaluation and Testing Plan

Testing Environment: The project will be tested by peers of the team members. Case by Case human testing will be used. Make sure answers fill Helpfulness, Honesty, Harmlessness (HHH) criteria. Unit testing will be used as well.
User Feedback Collection: After having peers review the project, team member(s) will take feedback into consideration and implement said feedback as deemed necessary.
Error Handling and Monitoring: Team members will monitor and review peer testing for any errors and see how peers with varying levels of skill interact with the project. Accuracy and flaws will be identified and adjusted accordingly.

Ethical and Responsible AI Considerations

Data Privacy: No sensitive data will be needed for this project.

Fairness and Bias: Testing and monitoring will be done to ensure no bias or wrong information is given.
Environmental Impact: A pre-trained model will be used for reduced computational costs.

Project Outcomes and Impact

Expected Impact: Saving time of both casual and competitive players of the game
Future Extensions: Adding a calculator that would also be able to tell the player what the monsters' stats will be at higher levels by adding formulas to a 2nd model that will accompany the first. AutoGen.

References

Dataset:
https://docs.google.com/spreadsheets/d/1II05Gkfgh4mkVTZ2ozaMvYJdfJ-Wq7xkwkL0L1BRmC4/edit?usp=sharing