**Ideation**

**Project Decision and Planning Journey:**

This structured approach outlines the decision-making process and considerations at each step, ensuring a thoughtful and user-centric development journey for the data analysis interview preparation tool.

**1. Platform Selection: Chatbot vs. Webpage**

Objective: Decide on the most suitable platform, considering available resources and optimizing user experience.

Considerations: Evaluate resource constraints and user preferences. Opt for a webpage due to the absence of a full-stack developer in the team.

**2. Technology Choice for the webpage: Streamlit for Webpage Development**

Objective: Select a technology stack that aligns with the team's skillset.

Decision: Opt for Streamlit, a user-friendly Python library for creating web applications, enabling the team to build a responsive and interactive webpage without extensive full-stack development expertise.

**3. Webpage Design and Feature Planning**

Objective: Envision the layout and functionality of the webpage.

Considerations: Focus on user-friendly design. Plan features such as dynamic difficulty levels, interactive navigation, and a comprehensive feedback system to enhance the user experience.

**4. Question Type and Resource Optimization**

Objective: Determine the type of questions to be included and establish resource-efficient methods.

Considerations: Choose a mix of technical and behavioral questions. Implement time limits to simulate real interview conditions. Optimize resource usage for scalability.

**5. Model Selection: VertexAI vs. OpenAI**

Objective: Choose a suitable platform for generating realistic interview questions.

Considerations: Evaluate the pros and cons of VertexAI and OpenAI. Consider factors such as ease of integration, customization capabilities, and the ability to generate diverse and relevant questions, budget, and time , and skills.

**6. Feedback Timing Decision: Real-Time vs. End-of-Session**

Objective: Decide when to provide feedback in the interview preparation tool.

Decision: Opt for end-of-session feedback to simulate real interview conditions. This approach aligns with industry practices, offering a comprehensive assessment and allowing users to reflect on their overall performance.

**Development Life Cycle**

* A report on the beta testing process, findings, and actions taken as a result appended to the final Documentation Report
* **Documentation Report:**
  + Compile a detailed report documenting the development lifecycle, including ideation, technical challenges, problem-solving strategies, and innovations.

**Database Creation for Few-Shot Learning**

In the endeavor to create a dataset of data analysis interview questions encompassing both technical and behavioral dimensions for training the LLM, the methodology employed leveraged ChatGPT for question generation.

The process involved instructing ChatGPT to craft questions across varying difficulty levels, specifically categorized as Easy, Medium, and Hard. A representative example of this process would entail directing the model to generate, for instance, 10 Easy-level technical questions tailored for data analysis interviews. The utilization of ChatGPT as a tool for question creation contributes to the systematic development of a diverse and comprehensive dataset, allowing for effective few-shot learning strategies in the context of data analysis interview preparation.

**Model Selection**