PROJECT PROPOSAL:
"ASC" THE AI STUDY COMPANION

TEAM MEMBERS:

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INTRODUCTION:

We intend to design a study companion that leverages recent advancements in large language model technology to provide personalized learning experiences. By dynamically generating questions, flashcards, and study materials based on the user's subject and skill level, the companion will adapt to individual learning needs, helping users focus on areas where they struggle most.

MOTIVATION:

To allow current and future students to study more efficiently, with the help of recent innovations in language model technology.

OBJECTIVES:

WEB APPLICATION

Design a robust web application to host our project, such that it is as widely accessible as possible.

INTERFACING WITH AI

Utilize artificial intelligence to make the study and review process even easier for students.

IMPLEMENTATION TECHNIQUES:

FRONT-END: React

React will power the web application's user interface, offering a responsive and dynamic experience. Its component-based architecture allows for modular and reusable elements, ensuring scalability while efficiently handling user interactions like selecting subjects and viewing progress.

BACK-END: Python

The backend, built with Python, will manage the application's core logic, linking the front-end with the AI engine. It will process user data, track performance, and facilitate communication between the interface and AI model, ensuring seamless functionality and data flow.

LARGE LANGUAGE MODEL (LLM): ChatGPT

ChatGPT will generate personalized study content, adapting to users' inputs by creating questions, flashcards, and quizzes based on their subject and skill level. The AI will track user progress, identifying areas of strength and weakness to provide tailored study guidance.

POTENTIAL USERS:

Current and future students in (some subject). Ideally those that have struggled with studying in the past, whether it be not fully latching onto previous study methods, or not knowing how to make effective flash cards, etc.

FEATURES AND DELIVERABLES:

1. WEB APPLICATION

The application will be hosted on the web, to make it as accessible as possible.

2. STUDY AREA QUESTION GENERATOR

The application will be capable of providing questions in any subject and any grade level in the form of interactable quizzes or flash cards.

3. SUBJECT TRACKING

The application will be capable of tracking the prompted subjects and identifying areas in which the user is strong, and weak. It will advise the user on which subjects need focus, or when to advance to a higher level.