**Statement of Work**

**1.Project Title:** Smart Teaching Assistant

**2.Overview:**

The Smart Teaching Assistant is a personalized learning platform designed to enhance the educational experience for students by leveraging advanced technologies like AI. The platform integrates intelligent document summarization, Files and Document Management, personalized study plans, progress tracking, and smart task management. It allows students to input their academic courses and self-study goals, and provides personalized study plans, quizzes, and summaries based on their current knowledge and preferences. The system will also incorporate a chatbot for academic assistance, adaptive revision tools, and a reward system to increase user engagement.

**3.Objectives:**

* Develop a personalized learning assistant that adapts to each student's academic and self-study needs.
* Enable efficient input and management of course materials, generating summaries, quizzes, and study plans.
* Integrate an intelligent chatbot that assists students by answering queries and searching for relevant resources.
* Implement progress tracking with quizzes, feedback, and course milestone tracking.
* Design a smart to-do list that prioritizes tasks and supports voice input for adding and managing tasks.
* Draft a calendar or scheduler that integrates with the to-do list, ensuring all deadlines, tasks, and study sessions are organized in one place to minimize variations and streamline task management
* Provide a rewarding and notification system to boost user engagement and productivity.
* Ensure a user-friendly UI/UX with customization options.
* Decrease the distraction of students
* Boost the academic performance of students through personalized learning paths, timely feedback, and adaptive revision tools.

**4.Scope:**

**4.1 Lectures and Text summarizing**

* Assess the student’s by summarizing Lectures and articles to help identify the key points in the text in a well formatted structure

**4.2 Intelligent Document Assistant**

* Allow students to upload lecture notes, slides, or other materials.
* Automatically generate summaries, multiple-choice questions (MCQs), and revision quizzes from the provided documents.

**4.3 Personalized Study Plans**

* Create custom study plans that adapt to the student’s knowledge, learning speed, and course milestones.
* Include recommendations for resources (e.g., videos, articles, projects) based on progress.

**4.4 Smart To-Do List**

* Develop a smart task manager that prioritizes tasks based on urgency and academic deadlines.
* Enable voice recognition for task entry and automatic task prioritization.

**4.5 Chatbot Assistance**

* Implement a chatbot that answers questions related to course content, using provided documents and external sources.
* Integrate a search function for the bot to find information beyond the user-uploaded content.

**4.6 Progress Tracking and Feedback**

* Track user progress across different courses, using quizzes, feedback forms, and milestone achievements.
* Provide timely feedback and assessments to ensure knowledge retention and understanding.

**4.7 Notification and Reward System**

* Notify students about upcoming deadlines, unfinished tasks, and daily study goals.
* Create a reward system to keep students motivated, such as earning points or badges for completing tasks or reaching study goals.

**4.8 UI/UX and Customization**

* Design a user-friendly interface for both Android and Web platforms.
* Allow users to customize their app experience.

**5.Deliverables:**

* Fully functioning Android app and responsive web platform.
* User profile and knowledge assessment tools.
* Document assistant for summarizing and quiz generation.
* Personalized study plan generator.
* Smart to-do list with voice recognition capabilities.
* Callendar that organize tasks.
* Chatbot for academic assistance.
* Progress tracking, feedback, and notification system.
* Engaging UI/UX with customization features.

**6.Technical Requirements:**

* Programming Language: Dart (for Flutter), Python (for backend services and ML models), HTML, CSS, and C# (for Web).
* Frameworks: Flutter (mobile), LangChain (For LLM configuring), Blazor (Web), SambaNova (LLM service)
* Database: Firebase or other cloud-based storage systems.
* Deployment Platforms: Android, Web.
* Version Control: GitHub

**7.Acceptance Criteria**

* The platform should allow users to easily upload and manage their academic courses and documents.
* The platform should allow users to summarize .pdf files and text in general
* The chatbot must provide relevant and accurate answers based on uploaded data and external sources.
* Personalized study plans should adapt to user progress and provide clear milestones.
* The smart to-do list should correctly prioritize tasks and support voice input.
* Users should be able to track their progress, receive feedback, and engage with the reward system.
* The app and web interface should be responsive, user-friendly, and customizable.