**AI-BASED PERSONALIZED STUDY PLANNER**

**Objective**

A website that creates a customized study plan for students based on their subject difficulty, exam dates, and available time.

**Tech Stack**

**Frontend:** HTML, CSS, JavaScript

**Backend :** Django/Flask

**AI :** TensorFlow for schedule optimization

**OpenAI :**API for explanations

**Abstract**

This project proposes an AI-based personalized study planner designed to optimize students' learning schedules by tailoring study plans to individual subject difficulties, exam dates, and available study time. Utilizing a robust technology stack—HTML, CSS, and JavaScript for an intuitive frontend; Django/Flask for scalable backend management; TensorFlow for schedule optimization; and the OpenAI API for generating explanatory insights—the platform aims to enhance study efficiency and academic performance. Key features include AI-generated study schedules that dynamically adjust based on user progress, an adaptive learning mechanism that personalizes study plans over time, an AI-powered chatbot to address student queries in real time, and comprehensive productivity tracking to monitor study habits and outcomes. By integrating advanced machine learning techniques with interactive web design, this project seeks to deliver a versatile tool that empowers students to manage their time effectively and achieve their educational goals.

**User Classes and Characteristics**

**Students:** Primary users who need personalized study plans.

**Educators:** May use the platform to monitor student progress and offer guidance.

**Administrators:** Manage the system, user accounts, and oversee content updates.

**Product Functions**

**User Registration and Authentication:** Secure login/signup for personalized experiences.

**Study Schedule Generation:** Create AI-generated study plans based on user inputs (subject difficulty, exam dates, available study time).

**Adaptive Study Plans:** Adjust schedules dynamically based on student progress and feedback.

**AI Chatbot:** Provide on-demand explanations, answer doubts, and offer study tips.

**Productivity Tracking:** Monitor study sessions, track task completion, and display progress metrics.

**Operating Environment**

**Client-Side:** Modern web browsers (Chrome, Firefox, Safari, Edge) on desktops, tablets, and smartphones.

**Server-Side:** Web server running Django/Flask on a Linux/Windows environment with Python support.

**AI Components:** Cloud or local deployment for TensorFlow models and OpenAI API integration.