

# **Problem Statement – NeuroPlanix (AI-Based Study Planner Web Application)**

Students often struggle to manage their study time effectively due to poor planning, lack of personalized study schedules, and difficulty in tracking their daily progress. Traditional study methods such as handwritten timetables or generic study Web Applications do not adapt to individual learning pace, subject difficulty, exam deadlines, or available study hours. As a result, students face issues like last-minute exam preparation, incomplete syllabus coverage, missed deadlines, low motivation, and inconsistency in daily study habits.

Additionally, many students are confused about which topics to prioritize, how to revise effectively, and how to balance multiple subjects. There is also limited access to instant academic guidance for clearing doubts, receiving motivational support, and planning recovery when study backlogs occur. Internship and career planning is another area where students lack proper guidance, especially in identifying suitable roles, required skills, and relevant project ideas.

Therefore, there is a need for an intelligent, user-friendly web-based system that can analyze a student's syllabus, exam schedule, available study time, and learning preferences to automatically generate personalized study plans. The system should help students track tasks, monitor progress, maintain study streaks, receive motivational support, get AI-based doubt solving, and obtain internship and career guidance in a single integrated platform. NeuroPlanix aims to address these challenges by providing an AI-powered personalized study planner that improves students' consistency, productivity, and academic performance.

# **System Workflow – NeuroPlanix (AI-Based Study Planner Web Application)**

## **1. Web Application Launch & Authentication Flow**

Explanation:

When the user opens the web Application, they must log in or register. This ensures user data such as study plans, tasks, progress, streaks, and internships are saved securely.

Flow:

- User opens Web Application
- Splash Screen
- Login / Register
- Home Dashboard

## **2. User Profile & Setup Flow**

Explanation:

After login, the user sets up their profile and basic study preferences.

Flow:

- Home Dashboard
- Profile Section
- Profile Setup
- Name
- Course / Semester
- Daily Study Goal
- Save Profile to Database

## **3. Subject & Syllabus Input Flow**

Explanation:

Users add subjects and syllabus details. This helps the system create topic-wise personalized study plans.

Flow:

Dashboard

→ Subject Manager

→ Add Subject

→ Enter Subject Name

→ Enter Exam Date

→ Select Difficulty Level

→ Add Syllabus

- Manual Topic Entry

- OR Upload PDF / Image

→ Save Data to Database

#### **4. Study Plan Generation (AI Core Workflow)**

Explanation:

The Web Application collects all study-related inputs and sends them to Gemini AI to generate a personalized study schedule.

Flow:

Create Study Plan Screen

→ User Inputs:

- Subjects

- Syllabus Topics

- Available Study Hours

- Exam Dates

- Difficulty Levels

- Preferred Study Time (optional)

→ Web Application Builds AI Prompt

→ Gemini AI API

→ AI Returns:

- Personalized Daily Schedule
  - Subject Priority
  - Topic-wise Tasks
  - Revision Plan
- Save Plan to Database
- Display Plan on Dashboard & Task List

## 5. Task Management & Progress Tracking Flow

Explanation:

Generated study plans are converted into daily tasks. When user's complete tasks, progress is updated automatically.

Flow:

Task List Screen

- User completes a task
  - Update Task Status (Pending → Completed)
  - Update Database
  - Web Application Calculates:
    - Subject-wise Progress (%)
    - Daily Progress (%)
- Dashboard Updates Progress Bars

## 6. Streaks, Backlogs & Gamification Flow

Explanation:

The Web Application tracks daily consistency and backlogs. Users earn streaks and badges for achievements.

Flow:

- User completes at least one task in a day
- Web Application checks today's activity
- If not already counted:
  - Increase Study Streak
  - Web Application checks missed tasks
  - Add to Backlog List
- Web Application checks Badge Conditions:
  - First Task Completed
  - 7-Day Streak
  - All Backlogs Cleared
- Unlock Badge (if eligible)
- Show Badge Popup

## **7. Motivation & Backlog Recovery Flow (AI Support)**

Explanation:

If the user has low activity or backlogs, the Web Application generates motivational messages and small recovery plans using AI.

Flow:

- Web Application analyzes user activity
- Missed Tasks
- Backlogs
- Streak Status
- Web Application builds summary prompt

→ Gemini AI API

→ AI returns:

- Motivational Message

- Small Recovery Plan

→ Show on Motivation Screen

→ Send Reminder Notification (optional)

## **8. AI Chat – Study Assistance Flow**

Explanation:

Users can chat with AI for doubts, explanations, and study guidance.

Flow:

Chat Screen

→ User enters question

→ Web Application sends prompt to Gemini AI

→ AI returns answer

→ Display response in chat

→ Save chat history

## **9. Internship Guide & Career Support Flow**

Explanation:

The Web Application helps users with internship preparation and career guidance using AI.

Flow:

Internship Guide Screen

→ User enters:

- Skills
  - Interests
- Web Application sends prompt to Gemini AI
- AI returns:
- Suggested Internship Roles
  - Skills to Learn
  - Project Ideas
- Display Recommendations
- User can:
- View Internships
  - Web Application (External Links)
  - Track Web Application Status (Manual / Optional)

## 10. Reminders & Notifications Flow

Explanation:

The Web Application sends reminders for study tasks, deadlines, streaks, and internship updates.

Flow:

System checks:

- Pending Tasks
  - Upcoming Exams
  - Streak Status
  - Internship Deadlines
- Send Push Notifications

→ User receives reminders

## **User Module (Final)**

Register

Login

Home Dashboard

Profile Setup

Add Subjects & Syllabus

Enter Study Hours & Preferences

Generate AI Study Plan

View & Update Task List

Track Progress & Backlogs

Study Streaks & Badges

AI Chat for Doubts

Internship Guidance & Web Application

Receive Notifications

Logout