**Business Requirement Document (BRD)**

**Project: Academic Planner with AI**

**Date:** June 22, 2025

**Prepared by:** NANTHINI S ([nanthini.cs22@bitsathy.ac.in](mailto:nanthini.cs22@bitsathy.ac.in))

B.E. Computer Science and Engineering

(7376221CS238)

**1. PROJECT OVERVIEW**

The goal of this project is to build an intelligent academic planner designed for students to efficiently manage their academic responsibilities. The system will utilize AI to offer personalized study schedules, deadline tracking, and productivity tips based on user preferences and behaviour.

**2. BUSINESS OBJECTIVES**

* Help students manage and optimize their academic workflow.
* Reduce stress by ensuring better time management.
* Improve academic performance through personalized AI-driven recommendations.
* Provide a centralized system for scheduling, tracking, and managing coursework and exams.

**3. SCOPE OF THE PROJECT**

* Student profile management
* Timetable creation (classes, exams, assignments)
* AI-based smart scheduling
* Deadline and notification system
* Task completion and progress tracking
* Study tips and productivity insights from AI
* Calendar visualizations (daily, weekly, monthly)

**4. KEY FEATURES & FUNCTIONAL REQUIREMENTS**

|  |  |
| --- | --- |
| **Feature** | **Description** |
| User Profiles | Collects student info and course list for personalized recommendations |
| Timetable Creation | Interface to input classes, exams, assignments |
| Smart Scheduling | Uses AI to generate optimal study times |
| Deadline Reminders | Push or in-app alerts for pending tasks |
| Progress Tracker | Tracks study hours and completed tasks |
| AI Tips | Provides study tips and productivity guidance based on user patterns |
| Calendar View | Displays planner entries in day/week/month view |

**6. TECHNOLOGY STACK**

|  |  |
| --- | --- |
| **Component** | **Technology** |
| Frontend | React with Vite, Tailwind CSS, Tailwind UI |
| State Management | Redux |
| Backend | Node.js, Express.js |
| Authentication | JWT (JSON Web Token) |
| Database | MongoDB |
| AI Module | NLP libraries, custom recommendation logic |

**7. USER ROLES**

* **Student:** Can create and manage personal profiles, tasks, and schedules.
* **System (AI Engine):** Monitors user data and provides personalized suggestions.

**8. DELIVERABLES**

* Fully functional web application
* Source code (well-documented)
* README with setup and usage instructions
* Video demo showcasing key features and output
* Brief explanation of the AI recommendation methodology

**9. ASSUMPTIONS & CONSTRAINTS**

* Users will have internet access and modern web browsers.
* The application will not support offline mode.
* AI recommendations will be based on available user data and may improve over time.

**10. SUCCESS METRICS**

* Number of active users
* Average task completion rate
* User satisfaction score (via feedback)
* Improvement in students’ time management (based on surveys)