Project: TaskPulse - Effective Task Visualizer and Manager

Overview

TaskPulse is a comprehensive task management and visualization system designed to streamline task assignments, tracking, prioritization, and review processes for college projects. It features separate workspaces for admins and users, AI-powered task prioritization, a reward system, meeting scheduling, AI-driven meeting summarization, and a chatbot for user assistance.

Key Features

1. User Roles

- **Admin**: Assigns tasks, manages priorities, reviews submissions, schedules meetings, and tracks progress.

- **User**: Receives tasks, completes them, uploads submissions for review, and earns points based on priority and deadline adherence.

2. Task Management

- Admin assigns tasks to users.

- Tasks appear in the **To-Do Section** for users.

- Users complete and upload work in the **Review Section**.

- Admin reviews the task and moves it to the **Done Section**.

3. AI-Powered Task Prioritization

- AI assigns priority levels to tasks.

- If AI assigns incorrect priority, the admin can manually adjust it.

- Users can view the priority but cannot change it.

- Priority-based reward system:

  ○ High Priority Task: **5 points**

  ○ Medium Priority Task: **3 points**

  ○ Low Priority Task: **1 point**

4. Dashboard and Analytics

- Users can track task progress, points earned, and completed tasks.

- Admin can visualize user task status, deadlines, and pending tasks.

5. Meeting Scheduling & AI Summarization

- Admin can schedule meetings with an **Invite Link** sent directly via email.

- AI summarizes the key points of the meeting automatically.

6. Chatbot Assistance

- AI-powered chatbot for user queries and assistance.

Website Structure

1. Public Website

- Home Page: Information about TaskPulse.

- Features: Overview of task management, AI prioritization, dashboard, and meetings.

- Login Button: Admin/User login portal.

2. Admin Workspace

- **Task Management**: Assign tasks, set deadlines, view task statuses.

- **AI Task Prioritization**: Assign or adjust task priority.

- **Review Section**: Approve/reject user submissions.

- **Meeting Management**: Schedule meetings, send invite links, and summarize meetings.

- **User Progress Tracking**: Monitor assigned tasks and deadlines.

3. User Workspace

- **To-Do Section**: View assigned tasks and priorities.

- **Task Submission**: Upload completed tasks for review.

- **Dashboard**: Track completed tasks, progress, and earned points.

- **Meeting Section**: Join scheduled meetings.

- **Chatbot**: AI-powered assistance.

Technology Stack

- **Frontend**: React.js, Tailwind CSS

- **Backend**: Node.js, Express.js

- **Database**: MongoDB/PostgreSQL

- **AI Integration**: OpenAI API / Machine Learning Model for prioritization

- **Authentication**: Firebase/Auth0

- **Email Integration**: Nodemailer for sending meeting invites

- **Hosting**: AWS/GCP/Vercel