

Event Management System Project Brief

Overview

You will build an **Event Management System** using **React.js (frontend)** and **FastAPI (backend)**. The system should allow users to browse and register for events, organizers to create and manage events, and admins to oversee the platform. An **AI recommendation system** will suggest relevant events to users and provide a chatbot for event Q&A.

Features to Implement

Phase 1: User Authentication

- User registration and login (JWT authentication).
- Roles: **User** (attendee), **Organizer**, and **Admin**.

Phase 2: Event Management

- **Organizer side:**
 - Create new events (title, description, date, venue, ticket price, category).
 - Edit or cancel events.
 - View attendee list.
 - Post updates to attendees.
- **User side:**
 - Browse events by category, date, or location.
 - Search and filter events (free/paid, type, popularity).
 - View event details (venue, description, schedule, ticket price).
 - Register/book tickets for events.
 - Track registered events and receive notifications.

Phase 3: Admin Dashboard(Optional)

- Approve or reject events before publishing.
- Manage users and organizers.
- Monitor ticket bookings.
- Generate reports (popular events, most active organizers, revenue).

Phase 4: Reviews & Feedback

- Attendees can leave reviews and ratings for events.
- Organizers can view and respond to feedback.

Phase 5: AI Component

- **Event Recommendations:** Suggest events to users based on their past registrations, interests, and browsing behavior.
 - **Event Success Prediction (Optional):** Predict if an event is likely to attract high attendance.
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Tools & Libraries

- **Frontend:** React.js, Redux/Context API, Axios.
 - **Backend:** FastAPI, SQLAlchemy (PostgreSQL or SQLite).
 - **AI:** Scikit-learn for recommendation
 - **Auth:** JWT (PyJWT in FastAPI).
 - **Notifications:** Email/SMS (e.g., Twilio or SendGrid).
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Deliverables

1. A working **React frontend** for users, organizers, and admins.
2. A **FastAPI backend** with routes for events, bookings, and authentication.
3. AI-powered **event recommendations** for users.
4. Documentation (README) explaining setup, features, and usage.