Attendify — Event Registration & Attendance Tracker

Overview & Goal

Attendify allows users to register for events and confirm attendance using OTP-based verification. Admins can manage events while ensuring only verified attendees check in.

Functional Requirements

- Role-based access for users and admins.
- Event creation, registration, and OTP-based attendance confirmation.
- Users can view upcoming events and their registrations.
- Admins can view all participants per event.
- Redis stores attendance OTPs with 2-minute TTL.

Database Schema

Table: users	user_id (UUID, PK), username (VARCHAR, unique), email (VARCHAR), password (VARC
Table: events	event_id (UUID, PK), name (VARCHAR), description (TEXT), created_by (UUID, FK users
Table: registrations	registration_id (UUID, PK), user_id (UUID, FK users.user_id), event_id (UUID, FK events.

API Routes

/signup	POST	Register user
/login	POST	Authenticate user
/events	GET	List all events
/events	POST	Create event (admin only)
/register/<event_id>	POST	Register for event
/confirm-attendance/<event_id>	POST	Confirm attendance via OTP

Technical Constraints

Stack: Flask, PostgreSQL, Redis, bcrypt, pyotp, smtplib. UUID-based IDs. Session format: uuid:role. Session TTL: 1 hour. OTP TTL: 2 minutes.

Evaluation Metrics

- Correctness of core logic (30%)
- Database design and relationships (20%)
- Session and OTP handling (20%)
- Security practices (10%)
- Code organization and documentation (10%)
- Completeness of API implementation (10%)