

EPICs & Sprint Plan

DAU Campus Complaints Resolve

Sprint 1 (1 Week) – User Authentication & Setup

Epic: User Authentication

P.O.C for Implementation - Abhishek Kothari (202301128)

- **Frontend:**
 - Build login/register UI with role selection (Student, Committee, Admin).
 - Redirect users to role-based dashboards after login.
- **Backend:**
 - Implement authentication APIs with JWT/session.
 - Role-based access control (RBAC).
 - Password hashing.
- **Database:**
 - Create Users & Roles tables.

Done when : Secure login works.

Sprint 2 (1.5 Weeks) – Complaint Submission

Epic: Complaint Submission

- **Frontend:**
 - Complaint form UI (title, description, file upload, anonymous toggle).
 - Form validation + confirmation message.
- **Backend:**
 - API to accept complaint submissions.

- Handle file uploads (store file path in DB).
- Generate complaint ID.
- **AI :**
 - Set up API integration environment (Gemini).
 - Design prompt templates for classification.
 - Return JSON response: {category, priority}.
 - Integrate into backend pipeline → every new complaint calls LLM API.
 - Use similarity to assist classification (if complaint resembles a past one, reuse that category/priority).
- **Database:**
 - Create Complaints table (id, title, desc, user_id, status, category, priority, file_path).

Done when : Students can submit complaints, which get auto-tagged (category + priority) by LLM.

Sprint 3 (1 Week) – Complaint Tracking & Dashboards

Epic: Complaint Tracking

- **Frontend:**
 - Student dashboard: list of submitted complaints with statuses.
 - Committee dashboard: assigned complaints with update buttons.
 - Admin dashboard: all complaints list.
- **Backend:**
 - GET APIs for complaint lists (student, committee, admin).
 - PUT API for status updates (Pending → In-Process → Resolved).
 - Integrate LLM classification output into complaint routing.
- **AI :**
 - Refine prompts with few-shot examples (eg, sample campus complaints).
 - Improve output reliability with formatting checks.
- **Database:**
 - Add Status column.

- Create Committee mapping table.

Done when : Complaints route automatically to the correct committee via LLM API.

Sprint 4 (1 Week) – Notifications & Escalations

Epic: Notifications

- **Frontend:**
 - Notification panel (in-app alerts).
 - Complaint timeline visualization.
- **Backend:**
 - Email notifications on complaint submission & updates.
 - Escalation rules (auto-flag if overdue).
- **AI :**
 - Auto-escalate if complaint crossed the deadline.
 - Add escalation flag in response.

Done when : Notifications work, escalations triggered automatically by deadlines.

Sprint 5 (1 Week) – Analytics & Dashboards

Epic: Analytics

- **Frontend:**
 - Analytics for committee dashboard (complaint count, resolution time).
 - Analytics for admin (complaints by category, priority, committee).
 - Student feedback form after resolution.
 - Filters (status, priority, committee).
- **Backend:**
 - APIs for analytics (counts, trends).
 - Feedback submission API.

- Search/filter endpoints.
- **AI :**
 - Add feedback loop → when committee/admin overrides LLM's classification, store override in DB.
 - For future calls, inject past overrides into prompt as context.

Done when : Dashboards functional with analytics; AI learns from overrides via prompt updates.

Sprint 6 (1 Week) – Reports & Export

Epic: Reports

- **Frontend:**
 - Report export UI for Admin & Committees.
- **Backend:**
 - Report generation (CSV/PDF).
 - Export API.
 - Privacy handling (mask anonymous complaints).
- **Database:**
 - Reports table.

Done when : Reports downloadable. AI can leverage past complaints.

Sprint 7 (1 Week) – Security & Developer Operations

Epic: Reliability & Security

- **Frontend:**
 - Responsive fixes.
 - Error handling & loading states.

- **Backend:**
 - Secure file storage.
 - Logging, monitoring, rate-limiting.
- **AI :**
 - Optimize API call usage.
 - Monitor LLM classification accuracy via stored feedback logs.
- **Database:**
 - Data encryption.
 - Performance optimization.

Done when : Secure, monitored system; LLM usage optimized.

Sprint 8 (1 Week) – Final Polish & Deployment

Epic: Finalization

- **Frontend:**
 - UI polish with DAU branding.
 - Add Help & Support page.
- **Backend:**
 - Final bug fixes.
 - Deploy backend + LLM integration to server.
- **AI :**
 - End-to-end testing: Complaint → API classification → Routing → Dashboard.

Done when : Fully functional prototype deployed, demo-ready.
