

Smart Campus Complaint & Maintenance System

Your Name

Course / Department

Date

Problem Statement

Students and staff struggle to report campus issues (broken lights, Wi-Fi, furniture). The process is

Project Goal

Make it easy to submit, track, and resolve campus complaints with notifications and analytics.

Tech Stack

Frontend: React

Backend: Node.js + Express

Database: MongoDB

Auth: JWT

Email: Nodemailer

Styling: Tailwind

High-level Architecture

Student Browser -> React Frontend -> Express API -> MongoDB
Admin Dashboard -> updates -> email notifications

Key Features

- Submit complaint with optional photo
- Track status (Pending, In Progress, Resolved)
- Admin dashboard and analytics
- Email notifications on status change

Demo Flow (Live)

1. Student submits complaint
 2. Admin logs in and views new complaint
 3. Admin updates status to 'Resolved'
 4. Student receives email update
- (Show screenshots or run the live app)

Code Highlights

- Complaint model (MongoDB document)
- /api/complaints POST & PUT routes
- Admin JWT auth middleware
- Frontend: ComplaintForm.js and AdminDashboard.js

Deployment Plan

Backend: Deploy to Heroku or Render; connect to MongoDB Atlas

Frontend: Deploy to Vercel or Netlify

Env vars: MONGODB_URI, JWT_SECRET, EMAIL_*

Future Work & Conclusion

Add image uploads to cloud storage, SMS alerts, mobile app (PWA/React Native).
This system reduces resolution time and gives admins actionable data.