

# DataZen

**Objective:** Design a web-based platform to streamline complaint lodging for hostel residents. Develop data analytics models to identify and analyze trends in complaints, helping hostel management optimize maintenance, resource allocation, and improve overall hostel experience.

Based on web-app / web-based platform, there are three major kinds of users

- The one who can register the complaints (Students)
- The one who will see and work for all the complaints (SLC Members and Wardens)
- The admin for the entire website

\*\* Remember the SLC members can also be students.

Hostel complaints can be of 7 different categories (according to us),

- Room Maintenance (electricity, fans, lights, cleaning, missing items, switches, etc.)
- Washroom Facilities (clogging, apparatus, mirror, water issues)
- Laundry Facilities (washing machines, drying racks)
- Internet/Wi-Fi
- Lift/Elevator
- Mess and Food (quantity, quality, hygiene, cleanliness of utensils)
- Other (e.g., animals or any additional concerns)

Along with that, each complaint will have a priority for it, it can be either **high, medium or low**.

We will use this priority for determining the speed of solving the complaint.

Schemas:

STUDENT:

Name

Roll Number

Mail ID

Contact

SLC - YES/NO (setup by admin)

Hostel

Room Number

COMPLAINT:

Date

Time

Category

Complaint

Priority [High, Medium, Low]

Student Name

Hostel

Room Number

Status [Open, In Progress, Resolved]

Pages to make:

1. Login / Register Page
  - a. OTP based login
2. Complaint Registration Page (Student) (Create + Delete)
  - a. Receive notifications or alerts when the complaint is resolved.

- b. Provide feedback after solving the complaint
- 3. Complaint view, responding, and marking of status Page (SLC and Warden) (Read+Update)
  - a. Receive notifications or alerts for high-priority or recurring issues.
  - b. Allow responding to the complaints with a TEXT. (like how GitHub has threads)
- 4. Admin Panel
  - a. Analysis Dashboard (just a few things that I think can work?)
    - i. Frequently occurring categories
    - ii. Floors/location where the complaint comes from frequently
    - iii. How many complaints come from each priority category
    - iv. Detect seasonal or monthly patterns in complaints
  - b. View all the complaints registered and can perform CRUD operations on them.
  - c. Can perform CRUD operations on different users in the database.

## DATASET

Data for analysis can be:

- Either can be made using any LLM model, and we can also make a form that we can circulate among the students in our batch, including juniors and seniors.
- We can find alternative datasets, some possibilities are:
  - Educational Institution Feedback Datasets
  - **Customer Service Complaint Datasets**
  - Maintenance Request Logs
  - Municipal or Civic Complaints

## **TECHSTACK**

React + BootStrap - for frontend

Node - For Backend

MongoDB Atlas - For DataBase

Python and PowerBI - For Analysis