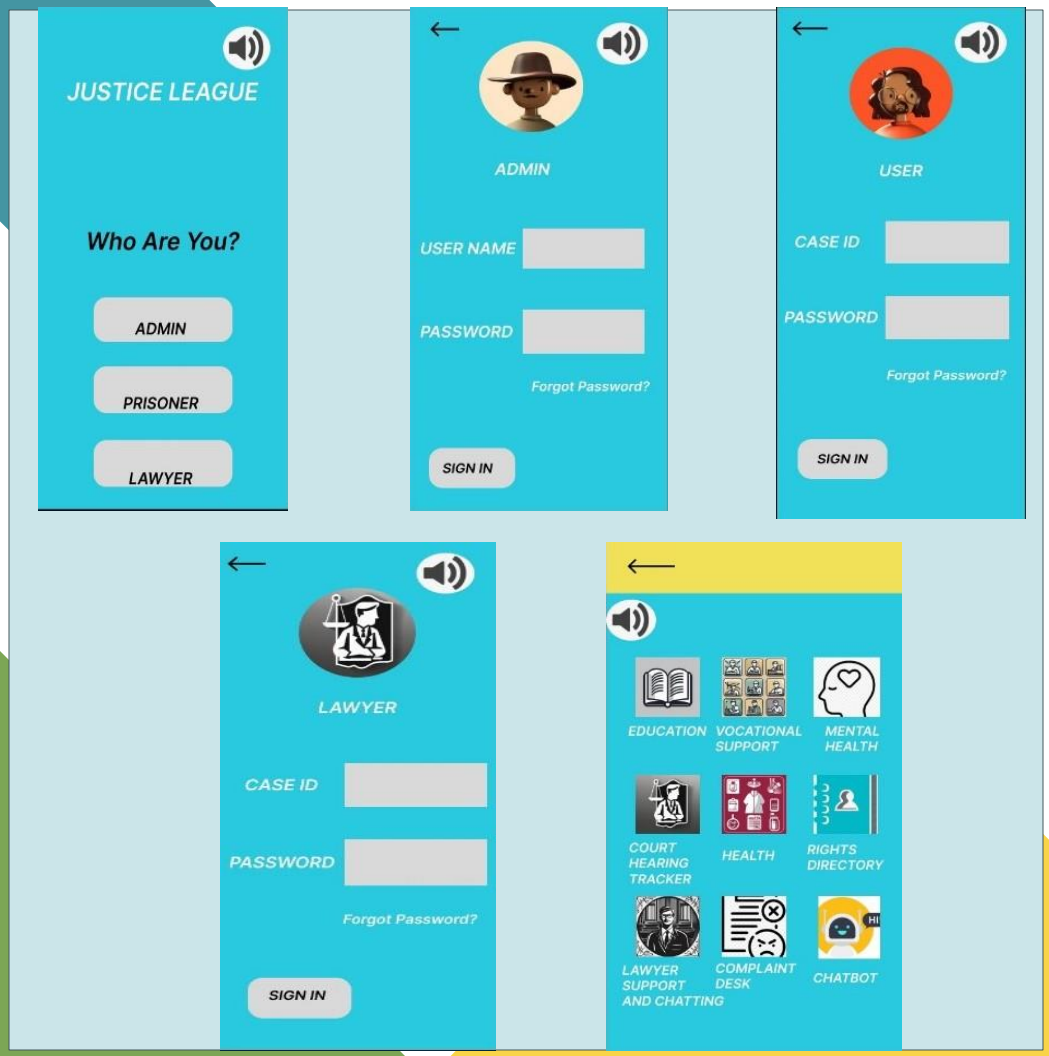
SMART INDIA HACKATHON 2023

SAMPLE APP



Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation: Ministry of Law and Justice

PS Code: 1282

Problem Statement Title: Tech-Driven Solutions for Undertrial Prisoners in India

Team Name: Justice League

Team Leader Name: Gauri Agrawal

Institute Code (AISHE): U-0685

Institute Name: Indira Gandhi Delhi Technical University for Women

Theme Name: Miscellaneous

Idea/Approach Details

Idea Description:

? The Problem:

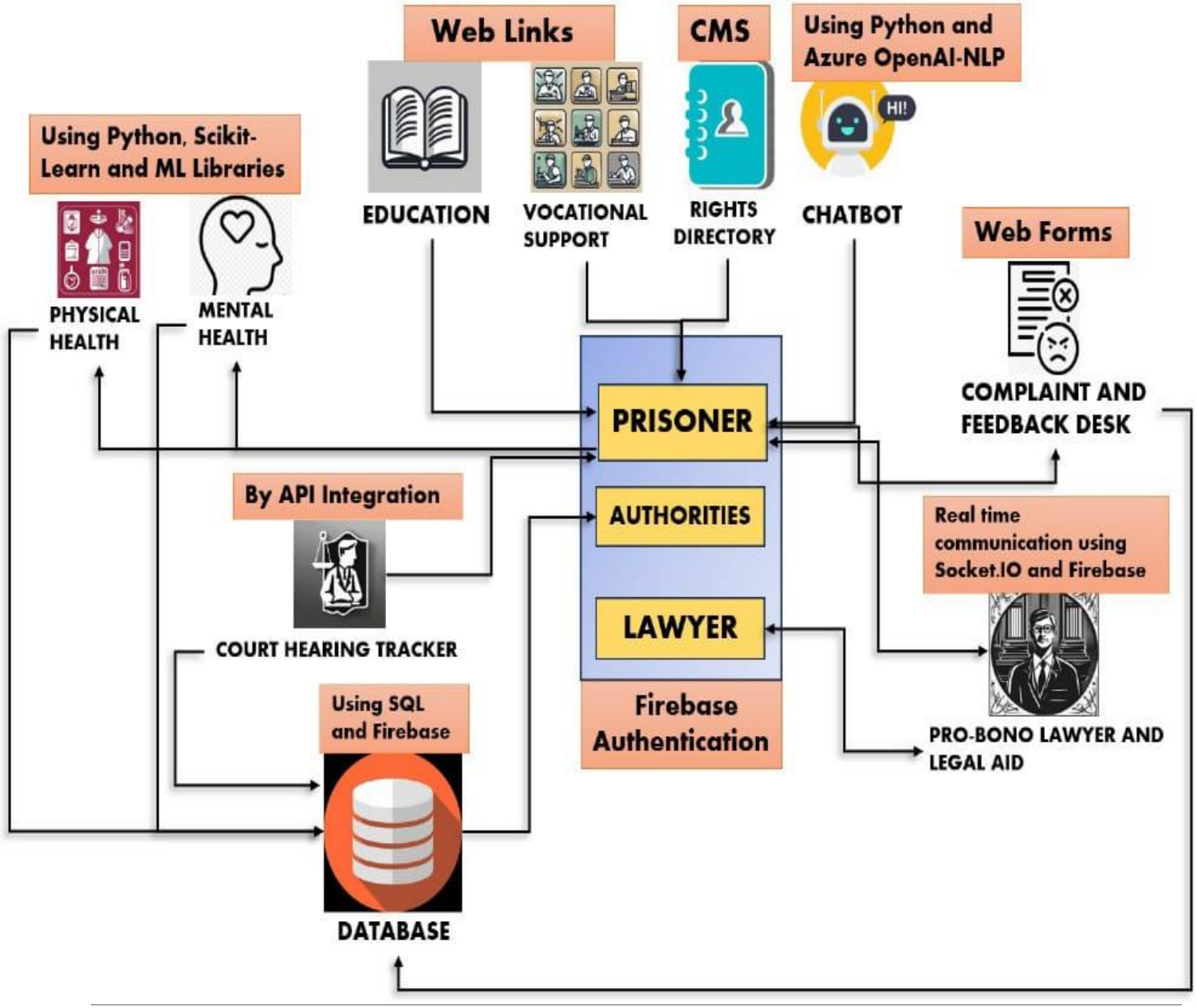
In India, 77% of prisoners are undertrials, highlighting issues of overcrowding, trial delays, and limited legal aid that impact living conditions and health. This undermines rights, efficiency, and disproportionately affects vulnerable groups, while insufficient rehabilitation impedes post-release reintegration.

The Need:

We need tech-driven solutions to speed up case processing, enable remote legal consultations, and improve prison management, safeguarding inmate rights.

The Proposed Solution:

We propose an "Audio Enhanced" Android and web-based application. It uses Artificial Intelligence (AI) and Machine Learning (ML) algorithms to streamline case management, reducing detention times. AI-driven educational programs improve prisoner reintegration. Rehabilitation programs equip prisoners with skills, and real-time monitoring ensures transparency and accountability.



USE CASES

- Both prisoners and authorities can access the app with unique login credentials and **two-way authentication**.
- Authorities will have access to certain areas only, while prisoners will have access to every area.
- Access to **education** is available through links to numerous free web resources, including government materials. A **rights directory** will be provided to ensure their rights awareness.
- They can access **vocational support** through the online resources we provide. We have a **complaint and feedback desk** where they can voice their concerns and track their progress.
- We use a Machine Learning (**ML**) model to assess mental health and doctor connections involving data exploration, preprocessing, and a variety of ML techniques, including **Logistic Regression**, **SVM**, **Naive Bayes**, **KNN**, **ANN**, **CNN**, **XGBoost**, **AdaBoost**, **Random Forest**, **Decision Tree**, **RNN**, and **GAN** for Mental Stress Detection.

SHOW STOPPER

- A **bilingual Android and web-based** platform based on Hindi and English will increase the solution's scalability.
- **Audio Integrated user interface** mobile application and website will provide information about specific icons or actions.
- Our **court hearing tracker** gathers real-time data from **government API**, enabling undertrial prisoners to access court proceedings and legal representation while allowing authorities to track any delays in hearings.
- We'll connect them with **pro-bono lawyers and legal aid organisations,** streamlining the court proceedings and bail procedures.
- The solution incorporates **secure lawyer prisoner communication** through a chat section, including user search, one-to-one chat, user status, image sharing, and voice and video calling using **Flutter** and **Firebase**.
- A 24/7 **voice-activated chatbot** built with **Python**, utilising **Azure OpenAI** and **Azure Speech services**, offering text and voice interactions while ensuring privacy and security by auto-deleting conversations after 48 hours.
- To enhance the **emotional well-being** of those affected by mental stress, our platform will offer thoughtfully selected uplifting content, including **inspirational quotes and mood-enhancing images**, to positively influence and elevate the user's emotional state.

BUSINESS MODEL:

1. ***Streamlined Case Management, Cost-Effective Rehabilitation, and Healthcare Management:***

- **Government contracts** for application deployment generate **revenue at scale.**
- Offering **data analytics services** creates an extra **revenue stream.**
- Licensing **AI/ML algorithms** to government agencies opens r**evenue opportunities.**

2. Why it is Profitable :

- **Cost Savings:** Our solution **reduces expenses** linked to detention, legal inefficiencies, and overcrowding. (Anticipated savings: **25%**)
- **Efficiency Gains:** Streamlined case management, legal processes, and healthcare management **enhance the efficiency** of the justice system. (Expected efficiency gain: **30%**)
- **Revenue Streams:** Government contracts, data analytics services, and AI/ML licensing open up **new revenue** source**s**. (Overall profit increase: **15%**)

TECHNOLOGY STACKS:

Team Member Details

Team Leader Name: Gauri Agrawal

BTech	Mechanical and Automation Engineering	IInd year

Team Member 1 Name: Saumya

BTech	Computer Science Engineering	Ist year

Team Member 2 Name: Shambhavi

BTech	Computer Science Engineering	IInd year

Team Member 3 Name: Ishita Gupta

BTech	Electronics and Communication Engineering	IInd year

Team Member 4 Name: Krishtina Patir

BTech	Computer Science Engineering	IInd year

Team Member 5 Name: Shiwangi

BTech	Computer Science Engineering	IInd year

Ms. Karuna Kadian

Computer Science Engineering	Quantum Computing, Blockchain Technology, Theory of Automata, Evolutionary Computing, Software Engineering, Artificial Intelligence	4 years

Mr. Vijay Kumar Yadav

Computer Science Engineering	Operating System, Computer Network, Cryptography, Advanced Cryptography	5 years