Cyber Rakshak

A CyberCrime Investigation based Project

TEAM NAME - Cyber Rakshak
TEAM ID - 363
Problem Statement - Open Innovation

Our Idea

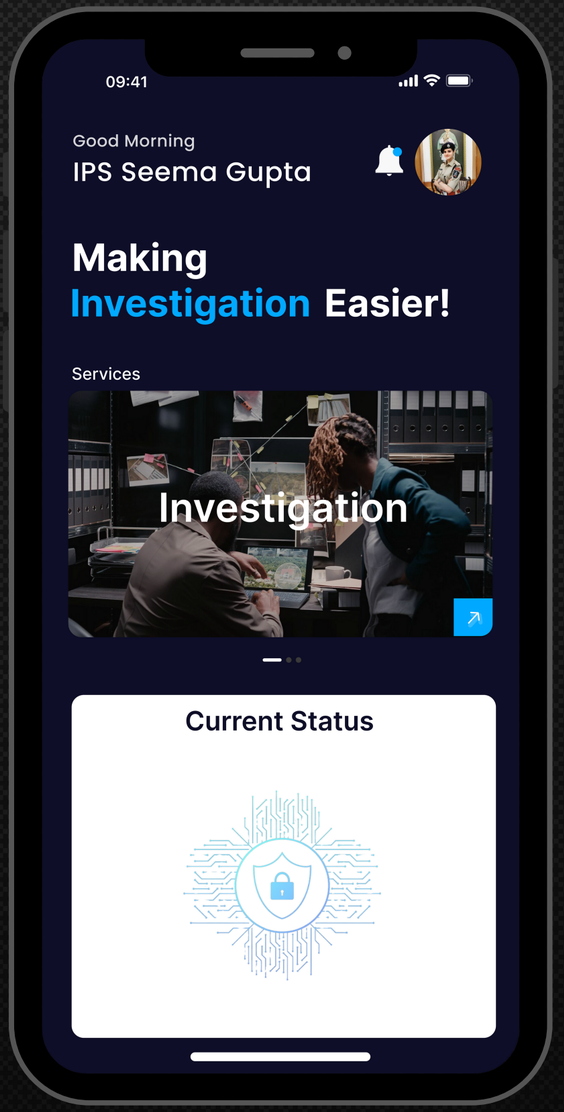
Crime Investigation System

Develop a cyber crime mapping system that will co-relate repetitive crime incidents, and criminal patterns & and track repeat offenders, by integrating data from various sources and utilizing data analytics to track various crime incidents. It will provide useful insights into crime mapping that can help in implementing preventive measures accordingly. It can also ensure efficient monitoring of repeat offenders.

Key Features

- The implementation of this model will decrease the investigation timeframe, enabling the resolution of cases in a shorter duration compared to the current process.
- It will introduce a fresh dimension to the model, enhancing the capabilities beyond those previously employed by the cyber cells in our country.
- This model will also aid in the early detection of cases by identifying patterns and indicators in their initial stages.
- In the future, this model is anticipated to extend its utility beyond cybercrime investigations, assisting in the resolution of cases across various domains.

App Features



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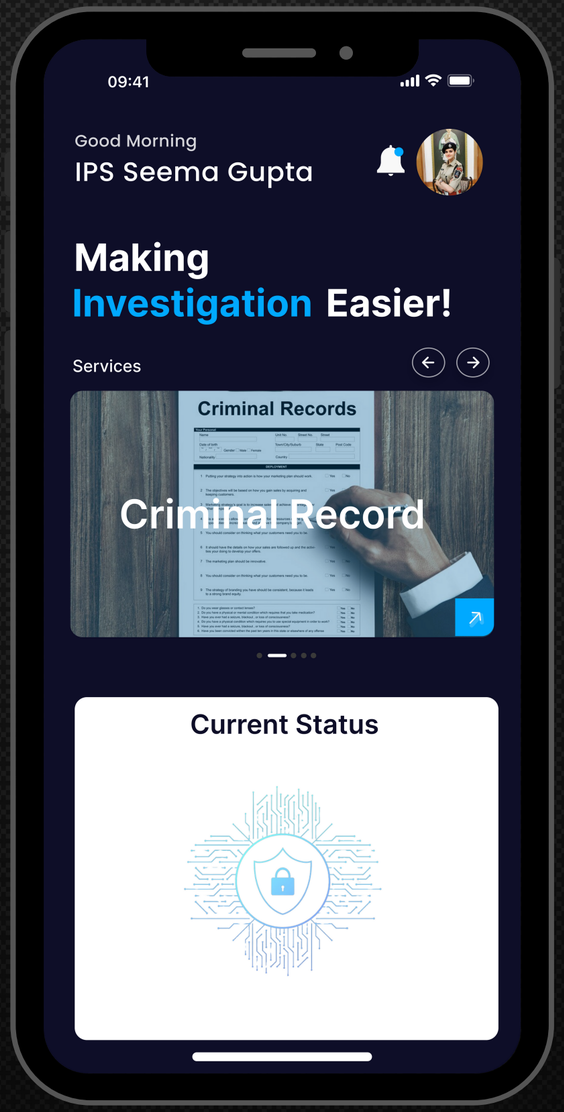

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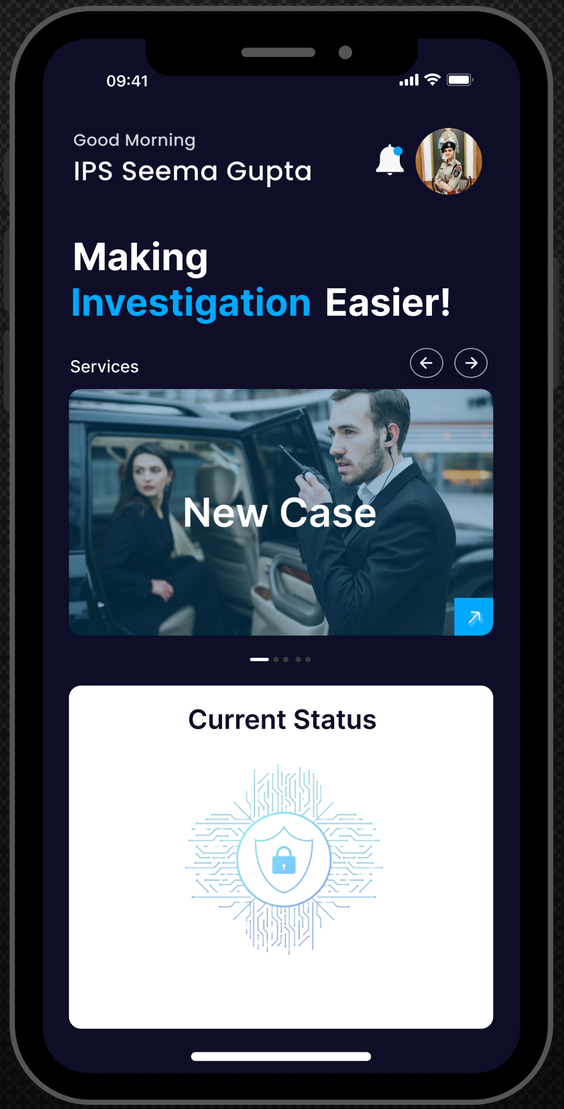

Technical Stack

For Preparation of the ML Model

Data Preprocessing and Cleaning

Data Cleaning Tools: Pandas, NumPy, Scikit-learn
Data Standardization Techniques: Normalization, scaling, encoding

Spatial and Temporal Analysis

Geospatial Libraries: GeoPandas, Shapely
Time Series Analysis Libraries: Statsmodels, Pandas, NumPy
Visualization Tools: Matplotlib, Seaborn

Criminal Pattern Recognition

Machine Learning Libraries: scikit-learn, TensorFlow, PyTorch
Clustering Algorithms: K-means clustering, hierarchical clustering
Classification Algorithms: Logistic regression, Support Vector Machines (SVM), Random Forest

Predictive Modeling

Predictive Modeling Libraries: scikit-learn, TensorFlow, PyTorch
Regression Models: Linear regression

Recommendation System:

Feature Extraction: TfidfVectorizer
Content-based Filtering Algorithms: Cosine similarity, vectorisation, Pearson correlation

For Frontend and integration the ML Model in App

1. UI/UX Design --- Figma
2.App Development --- Flutter{Frontend}
Firebase{Backend}

USP of the Model

Some unique selling points (USPs) that can set our model apart:

- Integrated Data Sources
- Predictive Analytics
- Repeat Offender Tracking
- Real-time Monitoring
- User-Friendly Interface
- Scalability and Adaptability

Vision

- Efficient Investigations
- Pattern Recognition
- Optimized Resolution
- Advancing Investigation Stages
- Pioneering Progress

Mission

- Correlation of Cases
- Commonality Identification
- Avoiding Redundancy
- Efficient Resolution
- Advancing Investigation
- Mission Objective

Target Audience

- Cybercrime investigators
- Cybercrime analysts
- Cybersecurity professionals

The Team

Sahil Panwar

TEAM LEADER

Shine Gupta

Ankit Singh

Dhruv Sharma


Thank You
By - Team CyberRakshak