FORENSIC SUITE
DETECTION ON TAP

Forensic Suite

A suite containing ideas regarding criminal detection.

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Problem Statement : Unified Data Verification

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BRIEF

- The suite consists of 3 modules which works in moderation with the police and forensic team.The basic idea behind the proposition of this suite is to ease up the process of checking and matching evidences which can lead to a suspect in case of a crime in a more digitalised way. This will not only make the work of the police and forensic team easier but also will help in the expansion of digital use in the field of forensics.The suit holds three main ideas which include:

- fingerprint matching

- facial recognition and

- unified data verification which can help to detect a criminal using a limited information and less manual labour.

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FINGERPRINT MATCHING

Basic forensic database

- This is based on the idea of fingerprint matching as seen in forensic science. In case there are fingerprints collected from a particular crime scene, a proper collection of the criminal's fingerprints can help to solve the case by examination and evaluation of the fingerprint to match a suspect's fingerprints. This technology basically uses pattern matching which can be incorporated using python.

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FACIAL RECOGNITION

Available database

- In case there is an availability of CCTV cameras at the crime scene and we are able to retrieve then CCTV footage , this idea of facial recognition can prove to be of great help. This module plans on using the retrieved CCTV footage from the crime scene in order to detect the faces of the person (people) present there and help the police department detect the suspect with the help of a database and artificial intelligence models.

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AVAILABLE CRIMINAL RECORDS

Updated databases

- This module is based on the idea of accessing criminal records which are already made available by the system database. These records should be stored in a database or software which should be accessible to all the police stations and other crime related branches on a global scale. If the information stored in this database matches the information of a suspect , a quicker action can be taken against the person(people) wherever they are and then start the further proceedings based on the prosecution precesses of their respective country. This is a more of a globalised form of making criminal records accessible to all crime related organisations.

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TECHNOLOGY USED

	Machine Learning Algorithms	Application Interface	User Interface Initialisation	Backend
1	Classification Algorithm	Flutter	Figma	Logging System
2	K-Mean Clustering	Cloud Storage	Miro	Docker Implementation
3	Decision Tree		Freeform	Cloud management
4	K-Nearest Algorithm			Minor Command Line Interfacing
5	Naive Based Algorithm			

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Features

- The suite is a combination of multiple modules which includes fingerprint matching , facial recognition and criminal records which are used in a more digitalised way.
- This is cost effective model which works on a lower budget . It thus saves money and a lot of time.
- The suite can be implemented on workstations and can also be accessed via the mobile application with the help of cloud deployment.
- The suite would be easy to use and have a better learning curve so this could be used by a large number of with little to no training required.
- The modules also focuses on the digitalisation of old techniques that have been used by the forces. Thus, reducing manual labour.
- The suit would be available in multiple regional languages.

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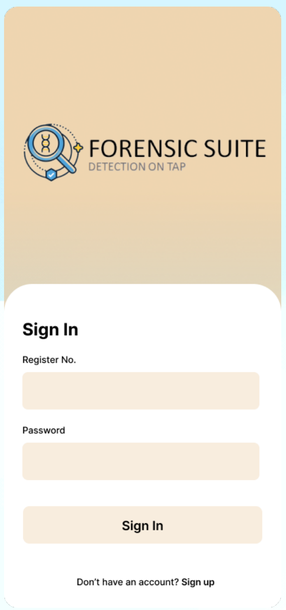
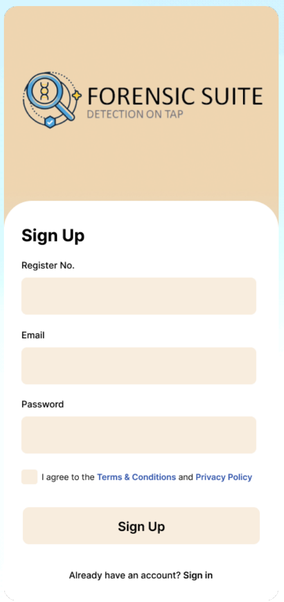
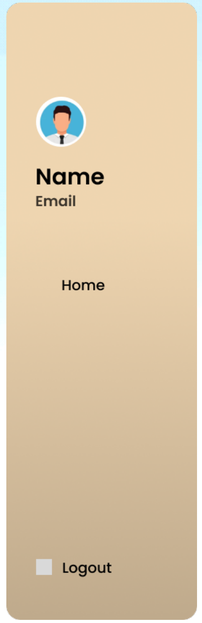
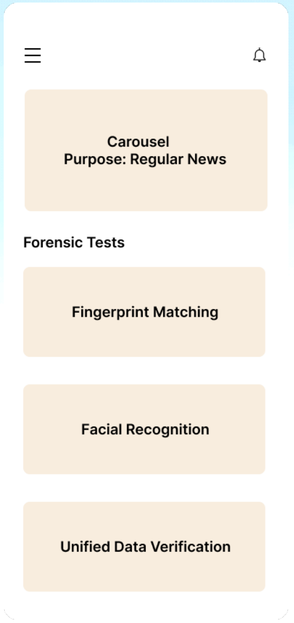
APPLICATION DESGIN

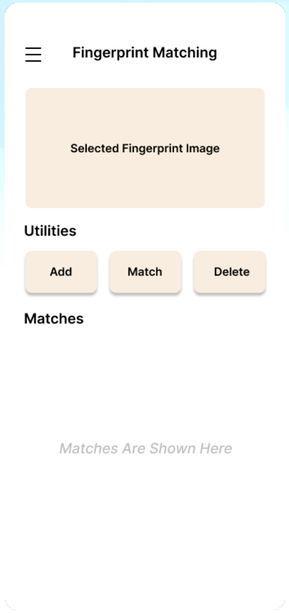
BASIC SAMPLE USER INTERFACE

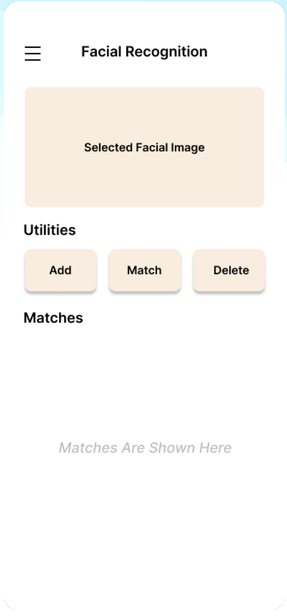


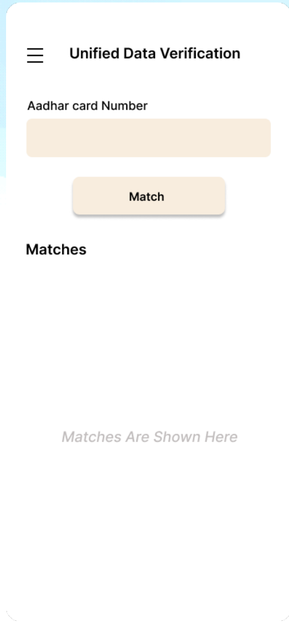












PAY AS YOU GO MODEL

- Many customers are hesitant to switch from a free product to a subscription service. There may not be much room for the firm to generate money unless the product is supported by a revenue source like advertising. The pay-as-you-go (PAYG) business model is an option that lowers expenses for the customer because they only have to pay when they need access and have the money to do so. This approach may thus be appealing to price-conscious customers who use a product or service infrequently or just occasionally. For instance, although many phone carriers fee based on minutes spent, a cloud storage service provider may charge depending on the quantity of storage utilised.

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PAY AS YOU GO MODEL

Module Test	Amount
Single Module Test	55Rs
Full Module Test	155Rs

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BUSINESS LOGIC

- This module requires a Pay as you go subscription (Please refer to the previous slide) at the time of the product roll out, The charges for Pay as you go model is attached in this document.

- Other expenses include Research and development cost and the Subscription model budget. The calculation log sheet of both of these models is attached along in this document.

SERVICES PROVIDED

- The whole package includes 5 hours of free service regarding the modules.

- Monthly data and security updates for the suite modules.

- Quarterly application updates.

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RESEARCH AND DEVELOPMENT COST

Category	Amount
Numbers of hours required	300 hours
Cost per hour	450
Hardware and software cost	12,350Rs
Final Budget	5,52,350Rs

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ESTIMATED COST AFTER IMPLEMENTATION

- Even after the implementation of this module, there is no huge cost outcome as it works on a Pay as You Go Model.
- Cloud Storage Pay as You go Subscription.
- There would be a need of constant updation of the database.

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THANK YOU