PROJECT REPORT

ADVANCING LAW ENFORCEMENT WITH INTEGRATED BIOMETRIC SYSTEM

20ITTE301 – LIVE IN LAB-I

Submitted by

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In partial fulfilment for the award of the degree

BACHELOR OF TECHNOLOGY

IN

INFORMATION TECHNOLOGY

SRI SAI RAM INSTITUTE OF TECHNOLOGY

(AN AUTONOMOUS INSTITUTION)

SAI LEO NAGAR, CHENNAI-44

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JAN – 2024

BONAFIDE CERTIFICATE

Certified that this project report "**ADVANCING LAW ENFORCEMENT WITH INTEGRATED BIOMETRIC SYSTEM**" is the bonafide work of "**MANOJ KUMAR D -** 412422205084**, BALAJI J –** 412422205020, **AKASH S -** 412422205010" who carried out the 20ITTE301 - LIVE IN LAB I Project Work under my supervision.

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Submitted for project Viva – Voce Examination held on _ _ _ _ _ _ _ _ _ _ _ _

INTERNAL EXAMINER **EXTERNAL EXAMINER**

ACKNOWLEDGEMENT

"A successful man is one who can lay a firm foundation with the bricks other havethrown at him." - David Brinkley

Such a personality is our beloved founder Chairman, **MJF. Ln. LEO MUTHU**. Atfirst, we express our sincere gratitude to our beloved chairman through prayers, whoin the form of a guiding star has spread his wings of external support with immortalblessings.

We express our gratitude to our **CEO Dr. J. SAI PRAKASH LEO MUTHU** andour Trustee **Mrs. J. SHARMILA RAJA** for their constant encouragement for completing the project.

We express our sincere thanks to our beloved principal. **Dr. K. PALANIKUMAR** for having given us spontaneous and whole hearted encouragement for completingthe project.

We are indebted to our head of the department **Dr. V. BRINDHA DEVI** for her support during the entire course of this project work.

We express our gratitude and sincere thanks to our guide **Mrs. E.LEELAVATHI** for her valuable suggestions and constant encouragement for the successful completion of the project. Our sincere thanks to our project coordinator **Mrs. K. ANURATHA** for the kind support in bringing out this project.

We thank all the teaching and non-teaching staff members of the Department of Information Technology and all others who contributed directly or indirectly for thesuccessful completion of the project.

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ABSTRACT

In the contemporary landscape of law enforcement, identifying and tracking criminals and thieves efficiently poses a significant challenge. The absence of a streamlined system to link AADHAR numbers and fingerprints with criminal records hampers investigative efforts. Current methods lack cohesion, making it arduous toaccess pertinent information swiftly. This project aims to address these issues by developing a comprehensive system that seamlessly integrates AADHAR numbers andfingerprints to provide accurate and timely information about individuals with criminal records. Through this initiative, the team endeavors to enhance law enforcement capabilities, streamline investigations, and contribute to a safer society. Developing a system to provide information about criminals and thieves using their AADHAR number and fingerprints offers several benefits. It can enhance law enforcement efforts by enabling the accurate identification of individuals involved in criminal activities. Leveraging biometric data for identification aligns with globalefforts to prevent and counter terrorism and violent extremism. Additionally, the project can contribute to strengthening data protection and privacy laws, ensuring that personal information is lawfully obtained and used for authorized purposes. By addressing the challenges associated with AADHAR misuse and biometric data security, the project can contribute to the development of more secure and privacy- conscious identification systems.

CHAPTER 1
INTRODUCTION

1.1 PROBLEM STATEMENT

There are various advantages to creating a system that uses a criminal's AADHAR number and fingerprints to provide information on thieves and criminals.Investigative efforts are hampered by the lack of a streamlined method to connect fingerprints and AADHAR numbers with criminal records. The existing approachesare not cohesive, which makes it difficult to quickly obtain relevant information. By creating a comprehensive system that seamlessly combines fingerprints and AADHAR numbers, this initiative seeks to overcome these problems by offering precise and timely information on people with criminal histories. There are various advantages to creating a system that uses a criminal's AADHAR number and fingerprints to deliver information on thieves and criminals. Investigative efforts are hampered by the lack of a streamlined method to connect fingerprints and AADHAR numbers with criminal records. The coherence of the current approachesmakes it difficult to access.

1.2 OBJECTIVE

Identifying and preventing fraudulent activities: Linking AADHAR numbers tobiometric and demographic information aims to improve welfare benefits and publicservices, and prevent fraud and corruption in government programs.

Enhancing security and privacy: The project will address challenges related to unauthorized data access, breaches, and fraudulent activities, ensuring that personal data is protected while achieving the system's objectives.

Facilitating law enforcement investigations: The project will enable state policeor other officials to access information about an AADHAR number holder by simply typing their AADHAR number, allowing for more efficient investigations

1.3 BENEFICIARY OF FINAL PRODUCT

Enhanced Crime Solving: Integrated biometric systems can aid in solving crimes more efficiently by providing accurate and timely identification of individuals involved in criminal activities.

Improved Public Safety: With quicker and more reliable identification methods, lawenforcement can respond to threats more effectively, ensuring the safety of the public.

Efficient Investigations: Biometric data can be crucial in conducting thorough investigations, narrowing down suspects, and building stronger cases against criminals.

Crime Deterrence: The existence of an advanced biometric system can act as a deterrent to potential criminals, knowing that they are more likely to be identified andapprehended.

Faster Emergency Response: In cases of emergencies or incidents, law enforcementcan quickly identify and locate individuals, leading to faster and more effective response times.

Reduced Identity Theft: Integrated biometric systems can contribute to reducing identity theft and fraudulent activities by ensuring a more secure and accurate meansof personal identification.

Efficient Judicial Processes: Integrated biometric systems can streamline the judicialprocesses by providing accurate identification information, helping in the swiftresolution of cases.

1.4 SOLUTION METHODOLOGY

To determine unique demands and challenges within the law enforcement system, a thorough needs assessment should be carried out. This entails comprehending the current setup, seeing any holes, and figuring out what kinds of crimes or security concerns biometric technology can potentially solve. After the needs assessment is finished, law enforcement organizations, IT specialists, and legal experts should work together in a cooperative manner. Forming alliances with pertinent parties guarantees a comprehensive comprehension of the technological, ethical, and legal aspects related to the application of biometric technologies. The creation of an integrated biometric system that is suited to the needs that have been identified comes next. This entails choosing the right biometric modalities—such as iris scans, fingerprints, or facial recognition—based on the particular needs of law enforcement assignments.

CHAPTER 2
SYSTEM BLOCK DIAGRAM & WORKING OF SENSOR

Fig 2.1 represents Block Diagram which are visual representations of processes using blocks to represent different components within the systems.

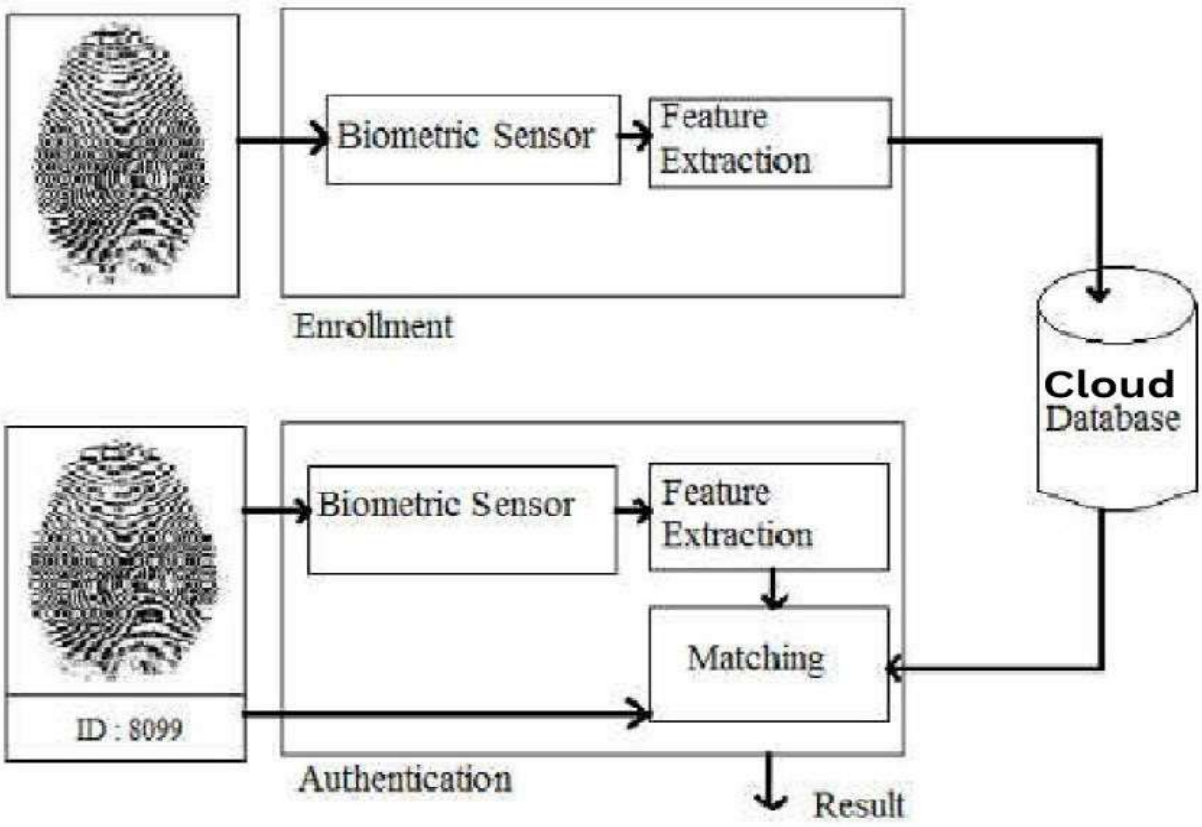

Figure 2.1 System Block Diagram

Fig 2.2 represents working of sensor which represents in mind map. It represents the process of sensor will compare the given template with stored template.

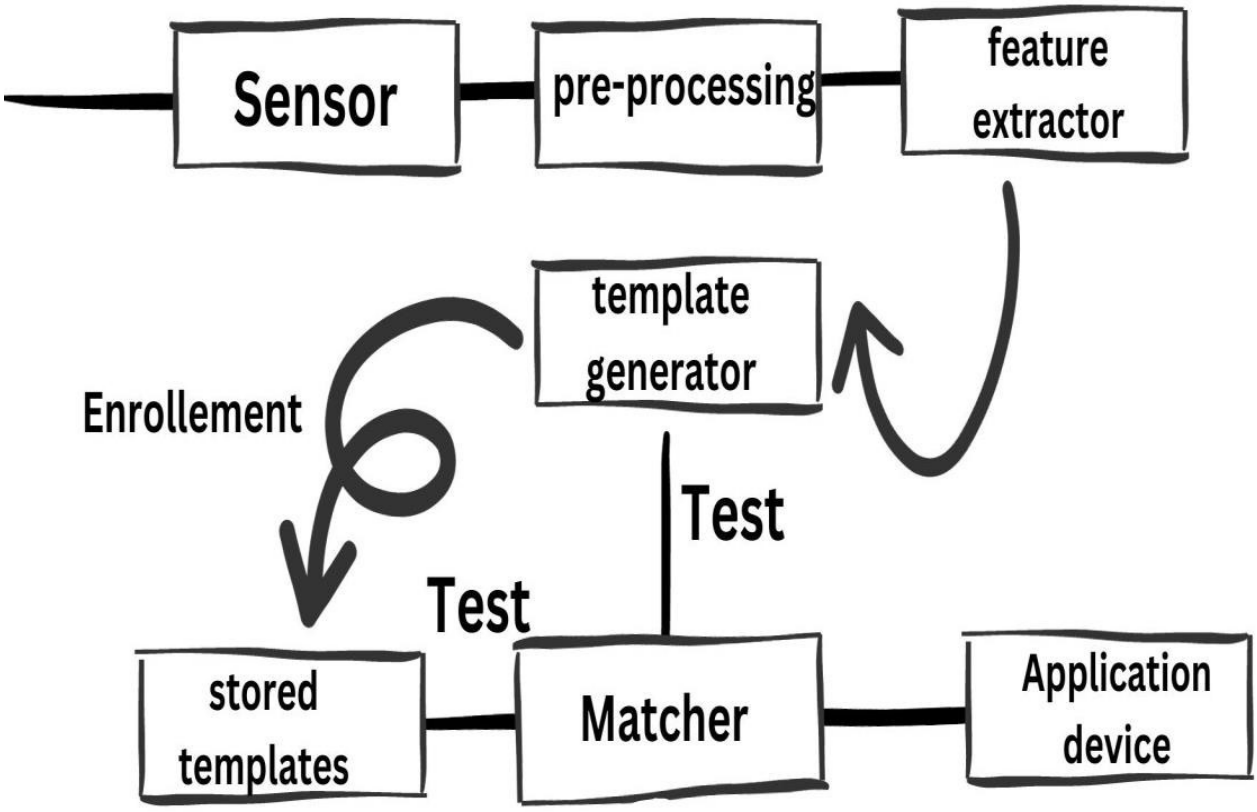

Figure 2.2 working of sensor

CHAPTER 3
LITERATURE SURVEY

S.NO	AUTHOR	TITLE	METHODOLOGY
1.	Karuna middha, Maahir sharma , daksh dudeja and amrita pandey	Aadhar-Based Biometric IdentificationSystem for Tracking Missing Persons	The proposed methodology involves creating CIDR partitions based on gender and regions with high trafficking or missing persons cases. Law enforcement agencies use a web portal to upload fingerprints, and a gender classification algorithm directs queries to the relevant partitions. Fingerprint matching includes minutiae extraction and false minutiae removal. The system generates a report with UIDAI details for identified fingerprints, providing crucial information about the missing person. The entire process aims to streamline and expedite the search for missing individuals using AADHAR-based biometric identification.
2.	Manish kumar, Hanumanthappa and Suresh kumar	Use of AADHAR Biometric Database for Crime Investigation - Opportunity and Challenges	Fingerprint and iris scans from crime scenes are compared with the AADHAR database to identify potential suspects. The system uses a centralized approach, where local police databases are checked first, followed by the central fingerprint database, and finally, if necessary, the AADHAR database. Error tolerance is addressed by incorporating demographic information as a filter in case of false identifications. However, legal and technical challenges, including consent issues and a small occurrence of false identifications, need to be addressed for successful implementation.

3.	Prabhanjan Gururaj	Identity management using permissioned blockchain	Implementing a Permissioned Blockchain system with unique Public Identifiers (PUIs) for individuals to ensure secure and authorized access. Utilizing hashing algorithms to protect and verify private data integrity. Incorporating Private Keys and Public Certificates for user authentication, granting controlled data access. Implementing Smart Contracts to automate real-time identity verification, allowing selective sharing of pertinent information.
4.	Wiliiam Ratjeana Malatji, Rene van Eck andTranos Zuva.	Acceptance of Biometric Authentication Security Technology on Mobile Devices	The methodology involves a literature review for understanding mobile biometric authentication and technology acceptance models, followed by a requirement analysis. A prototype with multimodal biometrics will be developed, addressing factors like hardware limitations. User testing will assesssystem performance and acceptance, with subsequent refinements. The final step focuses on integrating robust security measures to safeguard biometric data. This concise methodology aims to deliver a comprehensive and secure mobile biometric authentication solution.

5.	Dr. Harpreet Kaur and Ushveen Kaur	Governmental Initiative of DigiLocker: An Empirical Study with respect to Undergraduate College Students	Using a structured questionnaire to assess their awareness and usage of the DigiLocker scheme. Statistical analysis, specifically SPSS Statistics 21, is employed to test hypotheses related to factors influencing DigiLocker adoption. Frequency analysis explores students' document preferences, utility during admissions, and perceptions of security and ease of use. The study aims to provide insights and recommendations to enhance DigiLocker acceptance among the youth.

CHAPTER 4
CONCLUSION & FUTURE SCOPE

4.1 CONCLUSION

In conclusion, the proposed project holds great promise in revolutionizing the contemporary landscape of law enforcement by addressing the challenges associatedwith identifying and tracking criminals efficiently. The integration of AADHAR numbers and fingerprints in a streamlined system not onlyfacilitates the swift retrieval of information but also enhances the overall capabilities of law enforcement agencies. This initiative aligns with global efforts to combat terrorism and violent extremism by leveraging biometric data for accurate identification. Moreover, the project's focus on data protection and privacy laws underscores its commitment to ensuring the lawful and authorized use of personal information. By addressing concerns related to AADHAR misuse and enhancing biometric data security, the system not only contributes to more secure identification processes but also sets a precedent for privacy-conscious technologies. Through these advancements, the project aims to make a meaningful contribution to the broader goals of public safety and security.

4.2 FUTURE SCOPE

With the increasing rate of crime and terrorism, the integration of demographic details and biometric data with AADHAR card can help in identifying criminals more accurately and efficiently. Here are some potential future applicationsof your project: Reduced crime rates: The use of your project can help in reducing crime rates as criminals will be aware that they can be easily identified using their biometric data. Enhanced border security: The integration of biometric data with AADHAR card can also be used to enhance border security by identifying and trackingindividuals entering or leaving the country. Efficient law enforcement: Your project can help in streamlining law enforcement operations by providing accurate and real- time information about criminals.

REFERENCE

1) Use of AADHAR Biometric Database for Crime Investigation - Opportunity and Challenges Dr. Manish Kumar1 Asst. Professor, Dept. of Computer Applications, M. S. Ramaiah Institute of Technology, Bangalore-560 054, INDIA E-Mail:- manishkumarjsr@yahoo.com Dr. M. Hanumanthappa2 Professor, Dept. of Computer Science and Applications, Jnana Bharathi Campus, Bangalore University, Bangalore -560 056, INDIA E-mail:- hanu6572@hotmail.com Dr. T. V. Suresh Kumar3 Professor & Head,Dept. of Computer Applications, M. S. Ramaiah Institute of Technology, Bangalore-560 054,INDIA

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