iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 13 **Issue:** XI **Month of publication:** November 2025

DOI: https://doi.org/10.22214/ijraset.2025.75012

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 13 Issue XI Nov 2025- Available at www.ijraset.com

AI-Powered Web Platform for Locating Missing Individuals

Prachi Jain[1], Varun Kandunuri[2], Shrushti Pojage[3], Amit Pandey[4], Umang Pawar[5], Aman Gupta[6]
[1]*Assistant Professor, Department of Computer Science Engineering, G H Raisoni University, Amravati, Maharashtra, India*
[2, 3, 4, 5]*Department of Computer Science Engineering, G H Raisoni University, Amravati, Maharashtra, India.*

Abstract: ***Every year, millions of individuals — kids, senior citizens, and victims of disasters or human trafficking — disappear from the world. Older methods rely largely on human intervention and tend to be sluggish and inefficient.***
An AI-driven system that addresses limitations on current traditional methods is proposed within the project. The model combines face recognition with a central repository were families, NGOs, common people, or the police can upload images of missing people. People can report found individuals through an online interface that cross-compares images uploaded with existing records in real time. The identification could be done by facial unique features analysis and match potential matches on system database. If it detects a match, it triggers notifications to Admin which verify and proceed the process. The alerts are sent to authorities and families via Twilio-based SMS/WhatsApp messages with GPS locations. This system connects technology and humanity — transforming data and AI into instruments of empathy and action to reunify families.
Keywords: Facial Recognition, Deep Learning, Missing Persons, Face-api.js, Node.js, Web Platform.

I. INTRODUCTION

The disappearance of a loved one is a deeply painful situation for families and relatives, but it is also a difficult one for police authorities. The traditional method of conducting a search takes way too long. We were looking for a faster technological solution. “The Return Path” is a web-based platform that uses Artificial Intelligence to speed up the search for missing persons. We designed the whole system with a user-friendly interface, a secure cloud database system for securing all the data. We used face-api.js which finds the face in the image and creates a unique fingerprint for each missing person and stored into the database. Face-api.js compares the reported missing persons with the registered missing persons faceprints and instantly send a lead to the admin if the face matches. More importantly, in our system the admin makes the final call on a potential lead which ensures the technology is used safely.

II. METHODOLOGY

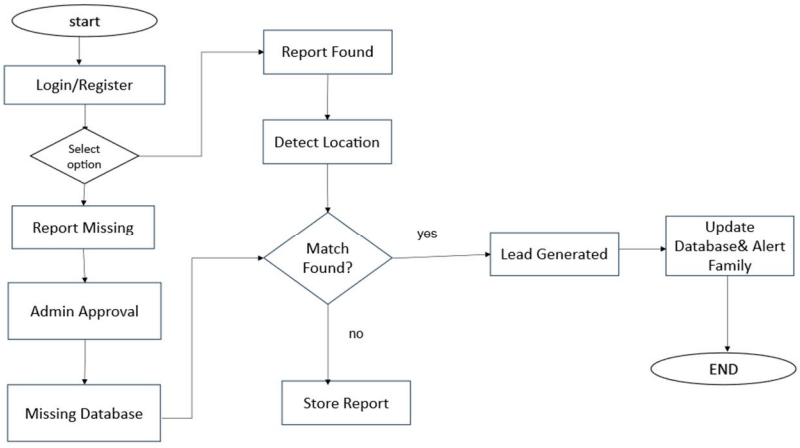


Fig. 1 Structure of system

Our project works step by step to find missing people using AI. It first collects the data, compare faces and sends alert if a match is found. The main goal of our system is to make the entire process fast and easy for everyone. The main stages are explained below:

©IJRASET: All Rights are Reserved

A. Data Collection and Uploads

The very first step is to gather the data. We have two ways for pictures and data to get into our system. First, when a person goes missing, their family or the police can register on our website by uploading the details and a photo of them. Second, when someone from the public uploads a photo of a found person, the system collects the exact GPS location using the JavaScript Geolocation API

B. Data Storage and Management

After the collection of data, it is stored in MongoDB database. Every photo and all the important details are stored in MongoDB database safely. When someone uploads a missing person detail, it is first sent to the admin for verification whether the registered case is genuine or not. After the admin verification is done, the missing person details are stored in the database with the face descriptor.

C. Face Encoding and Matching

We used a pre-trained AI tool called Face-api.js for face matching. When someone register's a missing person by uploading the photo and other required details, the AI scans the photo and finds a face and creates a unique face descriptor or a faceprint for the missing person and stores in the database. When a found person photo is uploaded, the AI creates a face descriptor for the photo and compares it with every single faceprint we have in our database. If a match is found, then it sends lead to the admin for further human verification If the photo is not matched then it is stored safely in the database for future comparisons.

D. Real Time Alert System

This feature is to make the system more useful in real life situations. Once a match is found a confirmed by the admin, the system will automatically send alerts to the concerned authorities or the family members. The idea is to use Twilio API for sending instant SMS or WhatsApp message to the family members or to the person who registered the missing person.

III.RESULT AND DISCUSSION

Our tests showed that the developed AI powered system works as a complete and practical tool. The best way to show this is to walk through the user's journey from start to finish, showing exactly how the platform operates.

Everything begins with our homepage (Fig.2), which has a clear and simple design with two main options:
"Report Missing Person" and "Report Found Person."

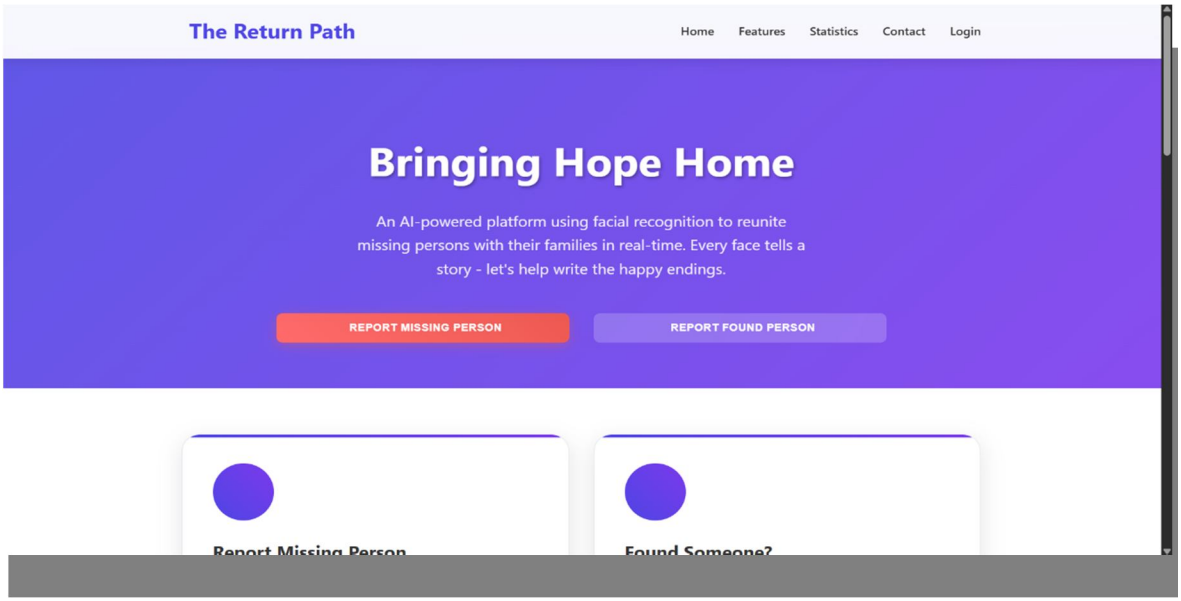


Fig. 2 Homepage

If a family member needs to report someone missing, they click the first button. This opens a simple form where they can enter the person details and upload a photo (Fig.3).

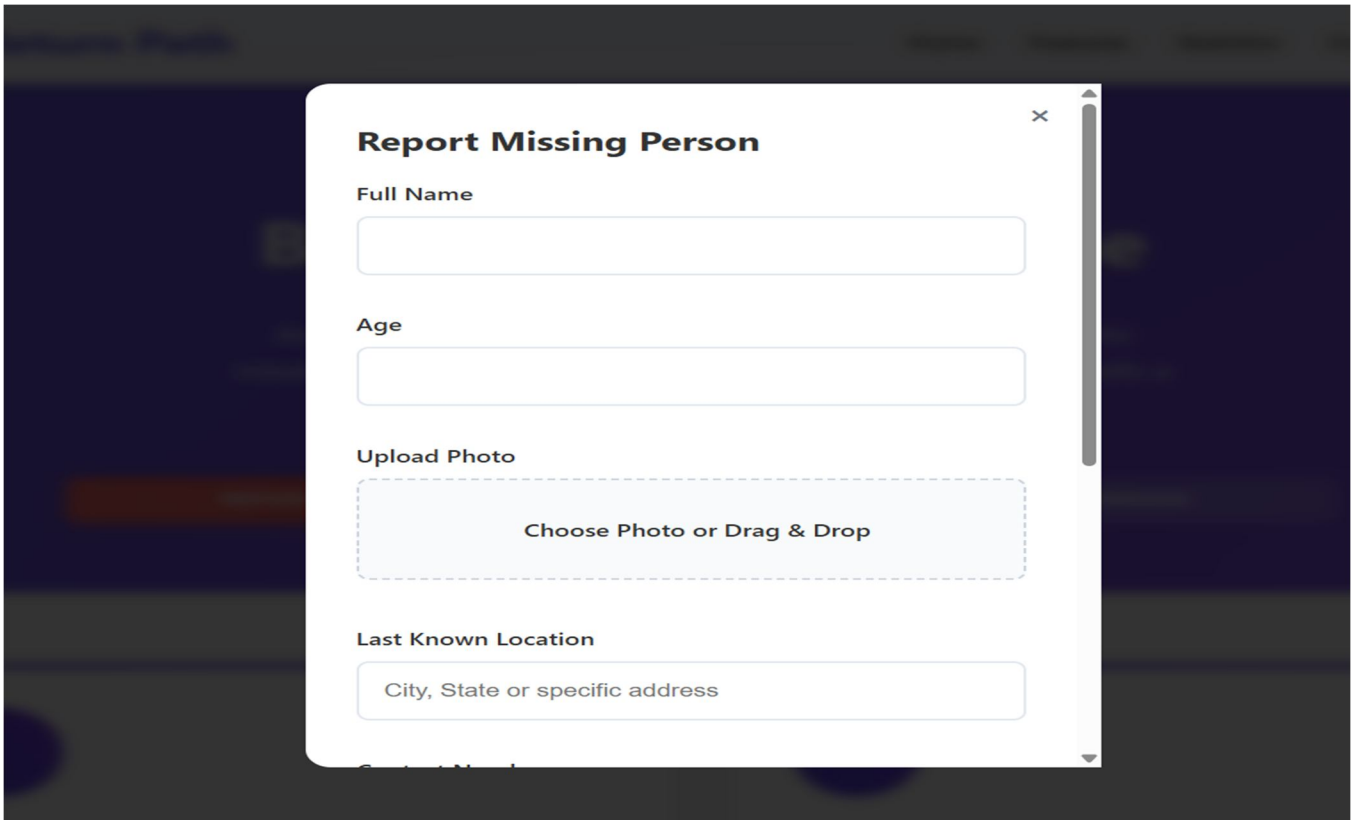


Fig. 3 Report Missing Person Form

This report does not go public right away. To ensure all the cases are genuine, it is first sent to an administrator who logs in securely (Fig.4) to a dedicated Admin Dashboard (Fig.5). The new case appears as a “Pending Approval.”

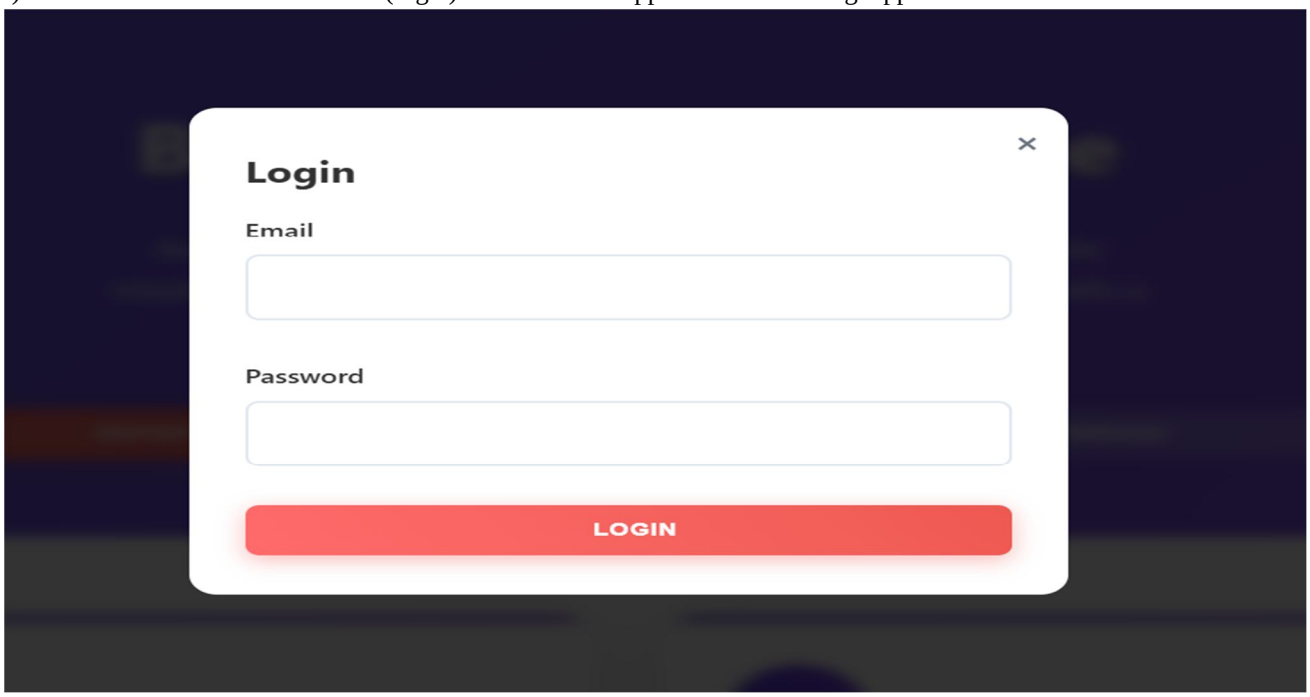


Fig. 4 Admin Login

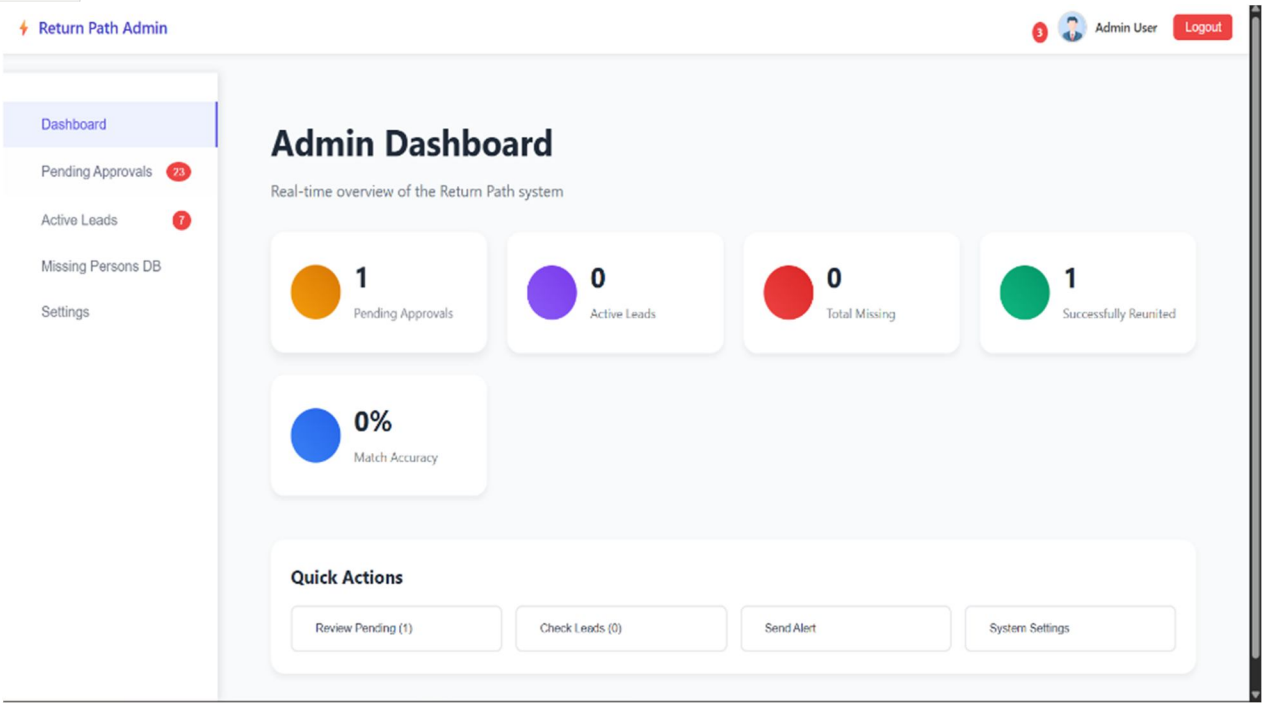


Fig. 5 Admin Dashboard

The Administrator can then review the details of the report (Fig.6) with a click of "Approve Report" button, the missing person's profile is officially added to our "Missing Person DB" (Fig.7), where their information is stored securely and can be viewed in more detail (Fig.8)

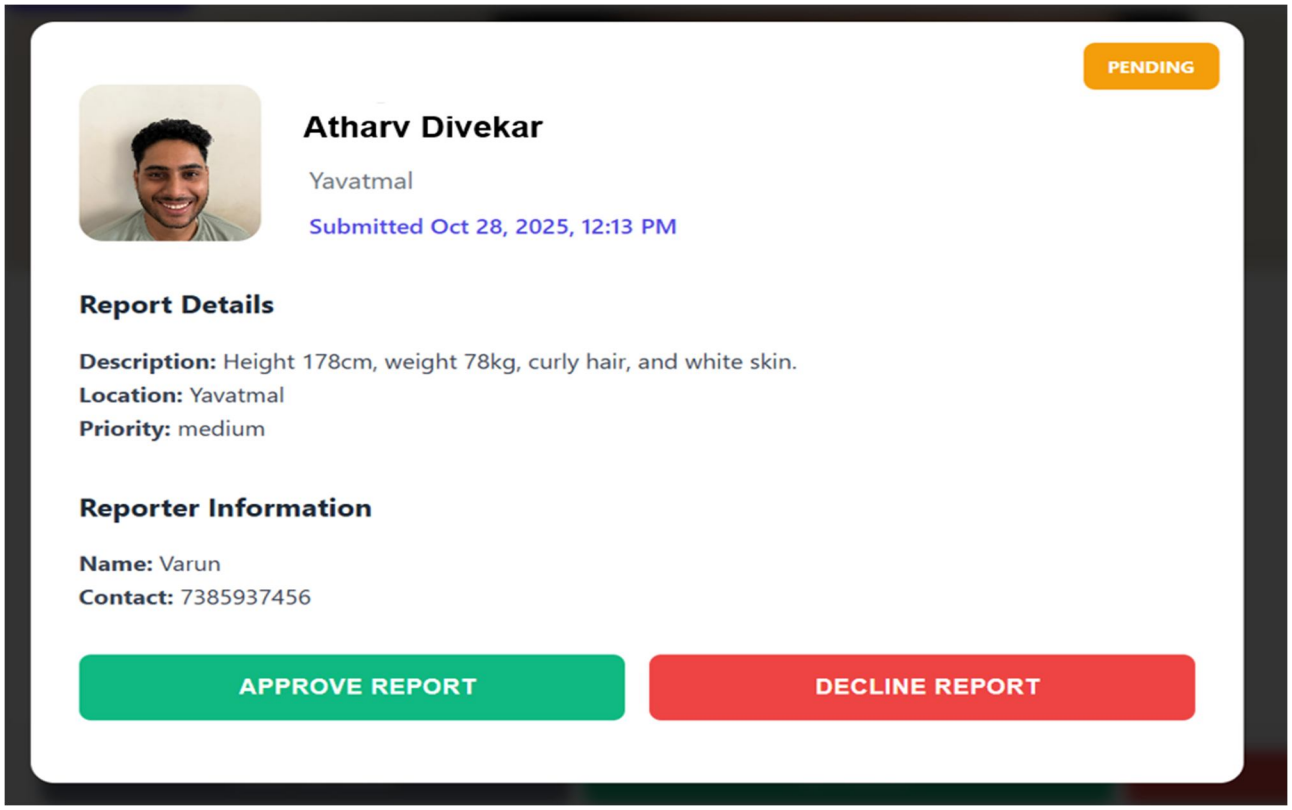


Fig. 6 Admin Approval Screen

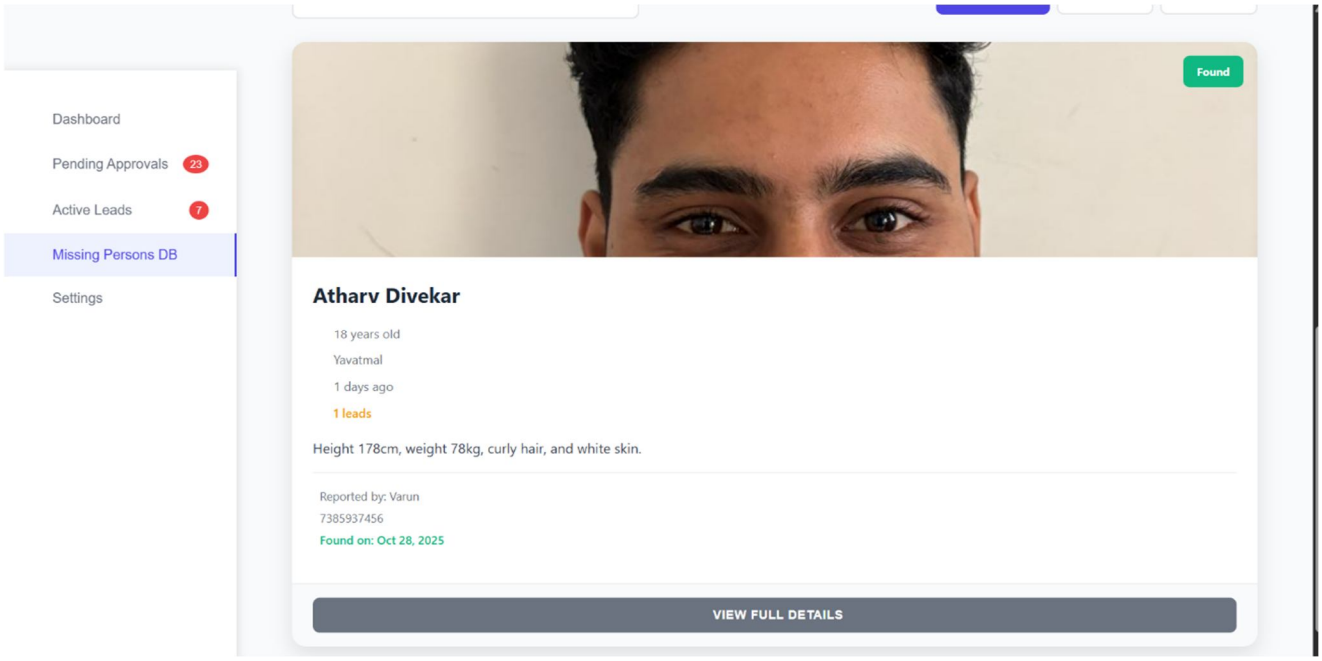


Fig. 7 Missing Person DB

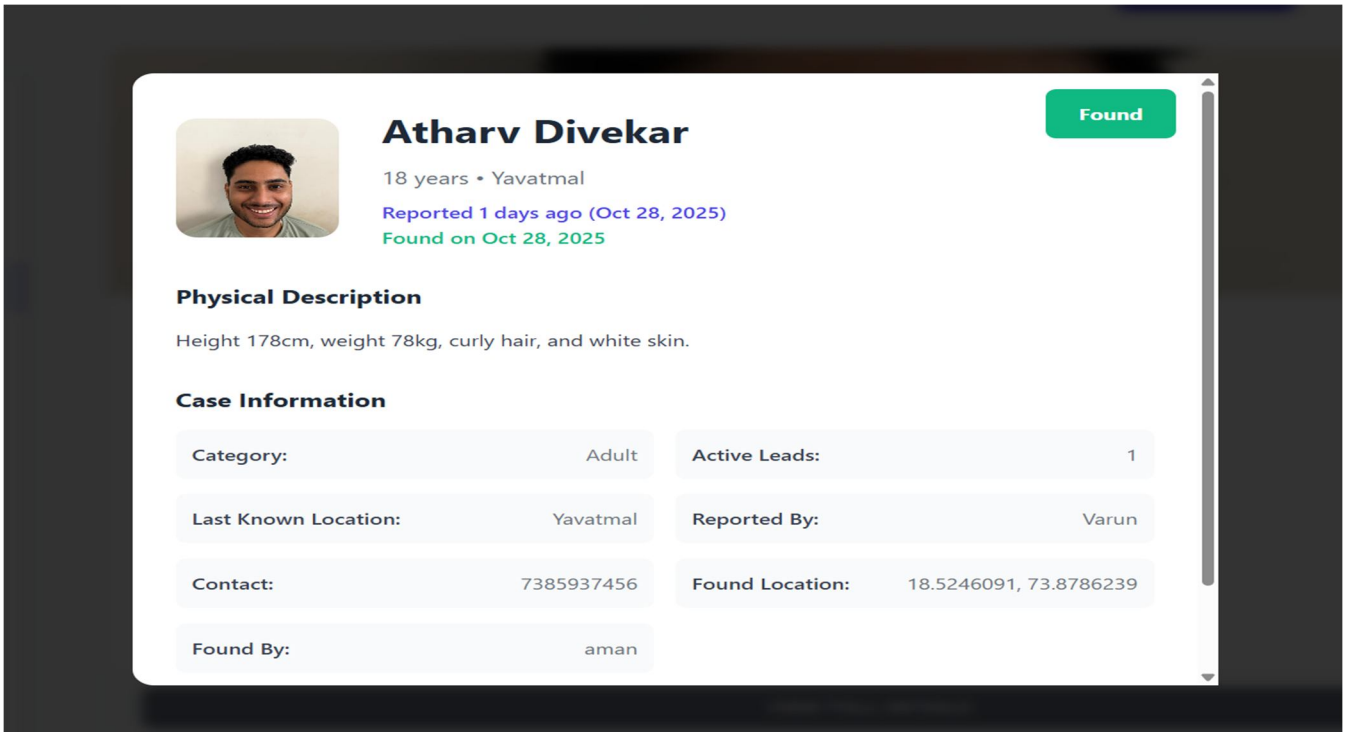


Fig. 8 Missing Person DB Full details

Now, let's say a helpful citizen spot someone they think might be missing. They can use the "Report Found Person" button on our homepage. This brings up another simple form where they can upload a photo (Fig.9). A key feature here is that the website automatically grabs the phone's GPS coordinates using JavaScript's Geolocation API, so we know exactly where the sighting happened.

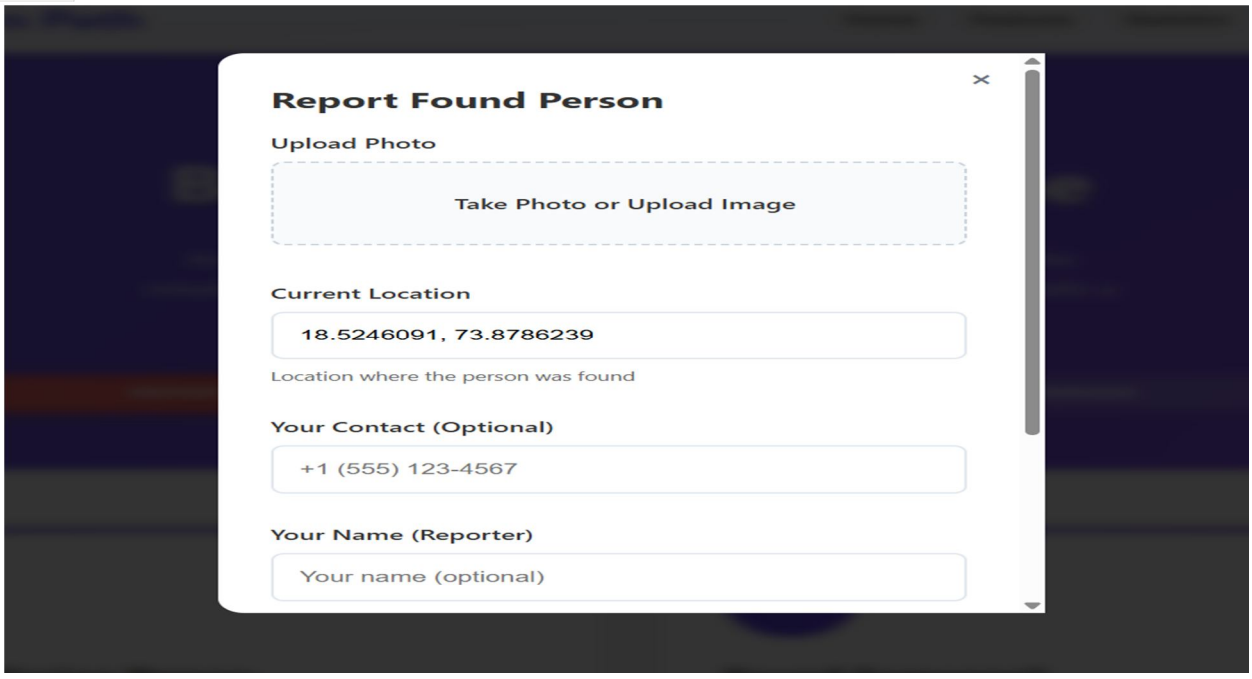


Fig. 9 Report Found Person Form

Once this for is submitted, our AI instantly compares the new photo to all the faces in our database. If it finds a match, it creates an "Active Lead" for the administrator to review (Fig.10). The admin can see the original photo and newly reported photo side by side along with a match percentage.

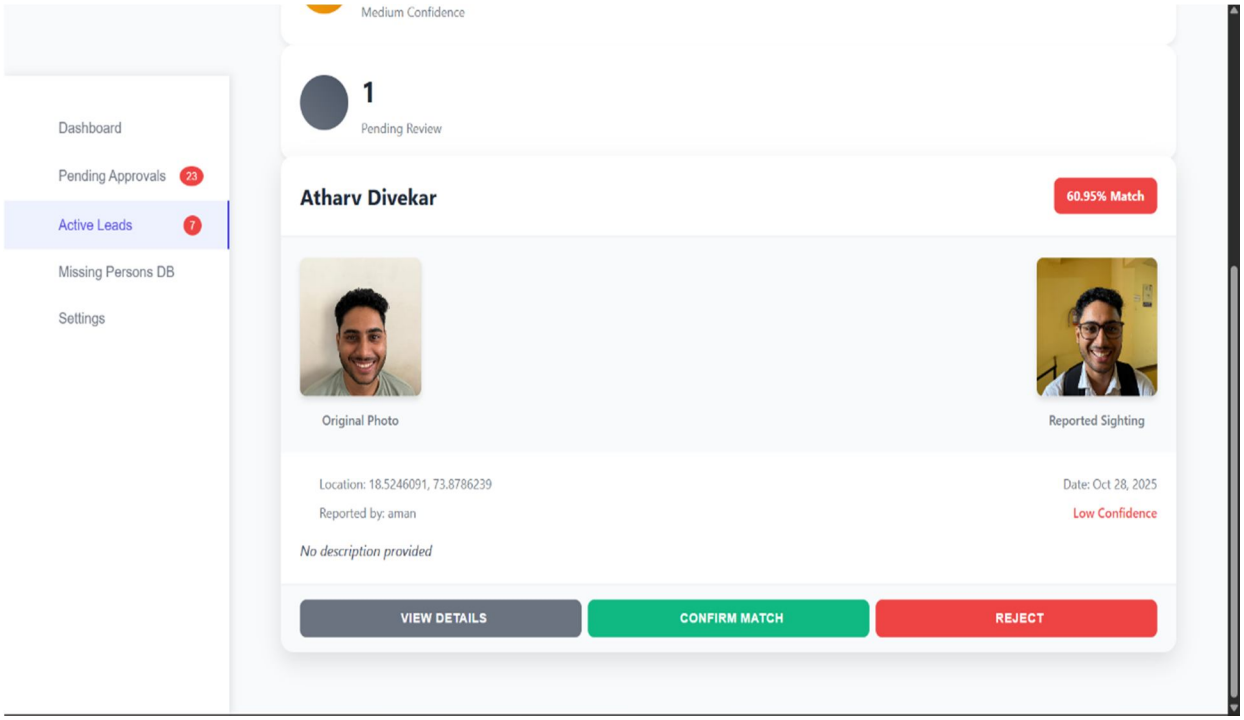


Fig. 10 Active Lead Screen

For the final step, the admin can view the details up close (Fig. 11) The admin verifies the lead and if they are certain it's a match, they click "Confirm Match and Notify Family" to send instant alert helping to resolve the case.

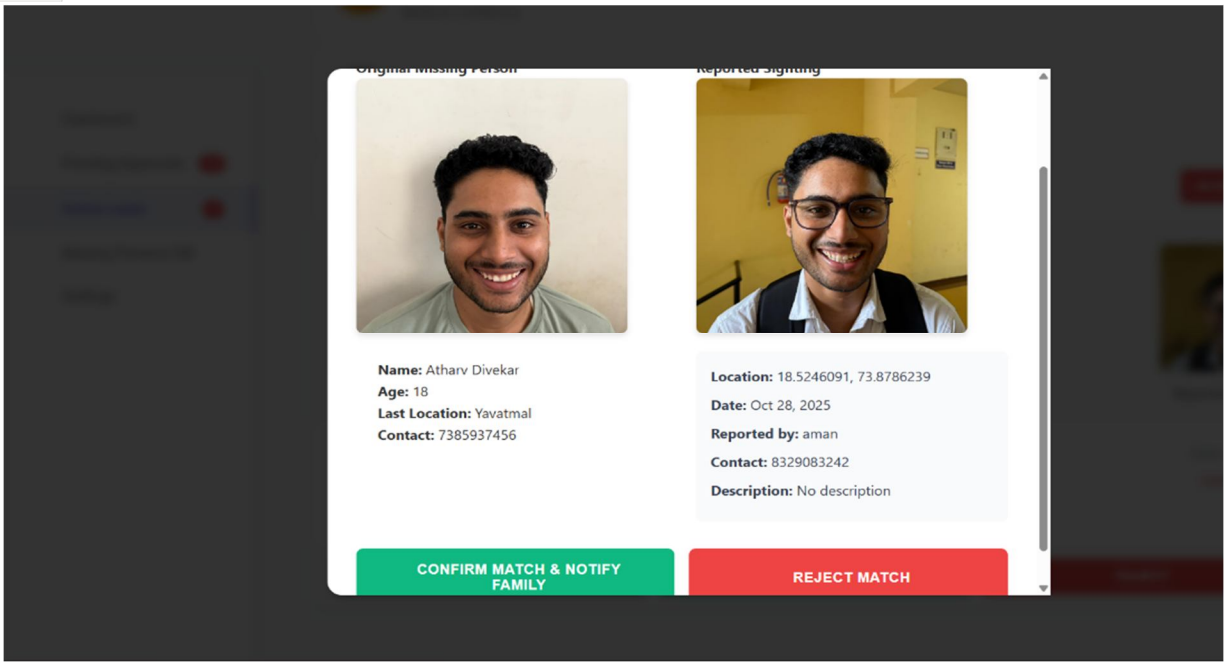


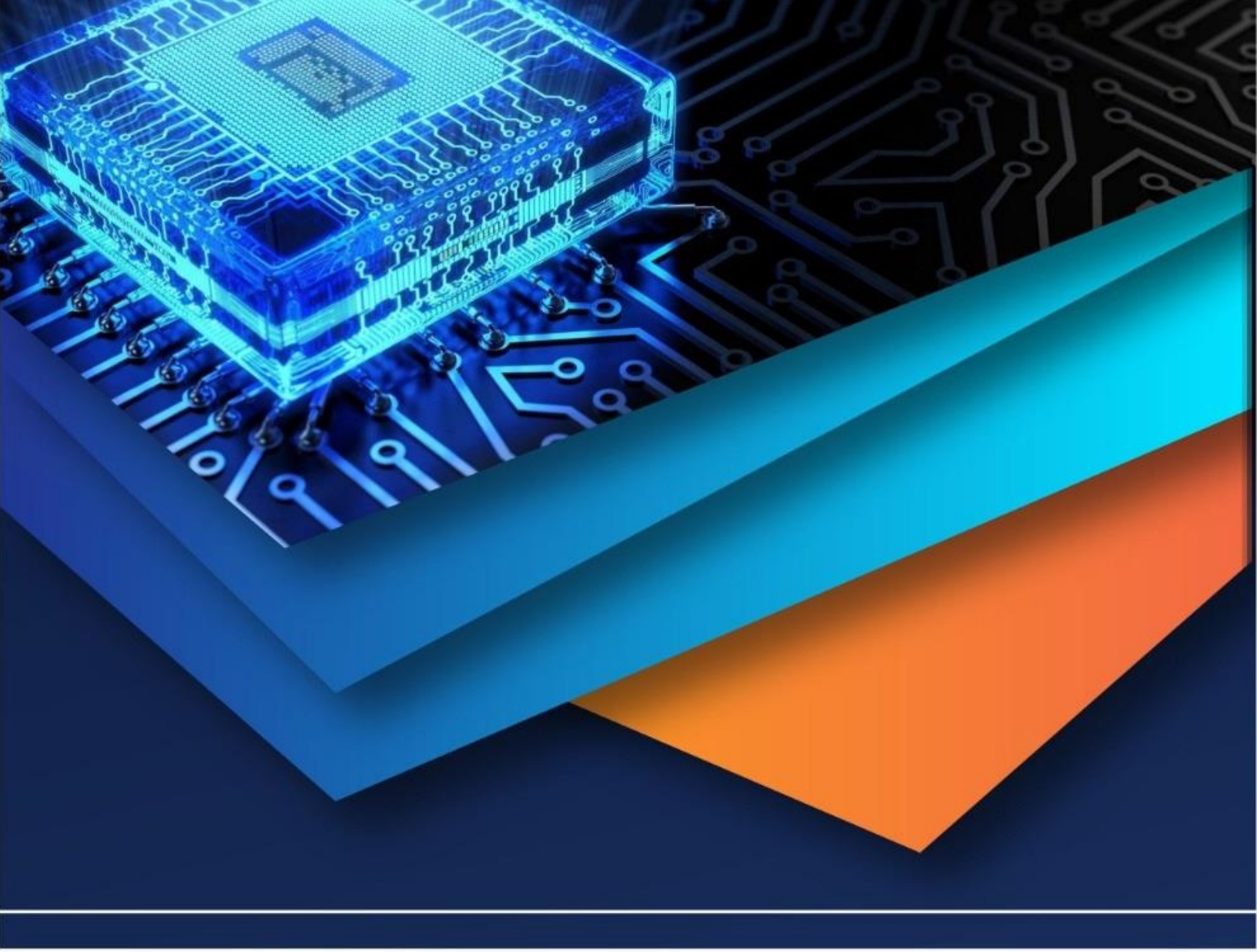
Fig. 11 Final Match Confirmation

IV. CONCLUSION

In today's world, where technology is growing so fast, we want to create something that could make a difference. Our AI generated platform to find missing people brings together power of Artificial Intelligence and web technologies to make the search for missing people faster, smarter and more reliable. By combining AI based facial recognition, image processing and geolocation capture, the system provides a structured and transparent way for the police, NGO's and public. Each match lead is then verified by a human to maintain accuracy. In our initial testing phase, the facial recognition module performed consistently well. The web interface built with React and Node+.js were simple and intuitive for all types of users. The image upload and GPS capture worked smoothly. Looking ahead, we plan to integrate Twilio-based alert notifications and Google maps visualization to make responses even faster and more connected.'

REFERENCES

[1] Ramavant Ganesh, Chilukuri Srija and Bhuriwale Devesh, "Finding a Missing Person Using AI," International Research Journal on Advance Engineering Hub (IRJAEH), Vol. 3, Issue 1, 2025.
[2] Hemadharshini S, Bheena Dhevi V and Bama Devi M, "AI Based – Assisted Seach for Missing People," International Journal of Engineering Technology and Management Sciences, Vol. 7, Issue 2, 2023.
[3] Pathipati Harshitha, Monali B Pipaliya and Gagan R, "Paper on Finding a Missing Person Using AI," TIJER – International Research Journal, Vol. 10, Issue 12, 2023
[4] Sanskar Pawar, Lalit Bhadane, Amanullah Shaikh and Atharv Kumbhejkar, "Find Missing Person Using Artificial Intelligence," International Research Journal of Engineering and Technology, Vol. 8, Issue 12, 2021.
[5] Gorli Lakshmi Sai Amalodbhavi, Pindiga Urmila, Sanathan Reddy and Mohammed Mosim Ali, "Face Recognition and Tracking of Missing Person using AI," Journal of Trends in Computer Science and Smart Technology, Vol. 7, Issue 1, 2025.
[6] MD Hashir AJ, "An Intelligent AI-Driven System for Identifying Missing Persons," TANZ, Vol. 20, Issue 5, 2025
[7] Ruchika Fegade, Pranali Nanaware and Shruti Kadu, "Finding Missing Person Using AI and ML", International Journal of Novel Research and Development (IJNRD), Vol. 10, Issue 5, 2025.
[8] Rupam Gautam, Vighnesh Bhandary, Mehveesh Shaikh and Simran Bhalla, "Missing Person Detection Using Facial Recognition," Vol. 7, Issue 4, 2025.



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)