**Isearch: Mobile app for searching lost person**

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***Introduction***

India faces a growing crisis of missing persons, with 88 individuals disappearing every hour, 2,130 daily, and 64,851 every month, according to the National Crime Records Bureau (NCRB). The worst-affected regions include West Bengal, Delhi, Tamil Nadu, Maharashtra, Madhya Pradesh, and Rajasthan. To address this urgent issue, the Isearch Mobile App provides a technology-driven solution with facial recognition, real-time alerts, and offline reporting, ensuring swift coordination between the public and law enforcement. By enabling rapid reporting, tracking, and verification, the app enhances search efforts, especially in low-connectivity areas. With admin oversight and data analytics, Isearch improves transparency, resource allocation, and disaster response, making it a modern, scalable, and community-driven tool for locating missing individuals efficiently.

The Isearch Mobile App for Searching Lost Person is a technology-driven solution designed to address the critical issue of missing persons. With thousands of individuals disappearing daily in India, the app leverages facial recognition, real-time alerts, and offline reporting to streamline the search and recovery process. Users can report missing persons by uploading photos and relevant details, which are then matched against existing reports using AI-based image comparison. The app also allows users to report found persons, helping in quick identification and reunification. Additionally, the offline reporting feature ensures that individuals in areas with limited internet connectivity can still submit reports, which sync automatically once online. The system consists of three key modules: User, Police, and Admin, where users can track reports, police can investigate cases, and admins oversee operations while generating analytics to improve efficiency.

This app enhances coordination between the public and law enforcement, ensuring transparency and faster response times. The police module helps officers verify and investigate cases efficiently, updating statuses like "Under Review" or "In Search." Meanwhile, the admin module oversees all reported cases, monitors police progress, and ensures fair resource allocation based on analytics. The platform fosters community involvement, allowing citizens to participate actively in finding missing individuals while maintaining data security and privacy. Unlike traditional methods, Isearch digitizes the search process, reducing delays and improving accuracy. By integrating technology, automation, and accessibility, the app provides a scalable, modern, and impactful solution to a pressing social issue, ultimately aiding in quicker recovery and reuniting missing persons with their families.

***Related Works***

The "*Missing Person Finder*" project, detailed in the paper from the *International Journal of Advanced Research in Science, Communication and Technology* (IJARSCT) in *2024*, employs advanced techniques such as photo recognition and machine learning algorithms, leveraging Firebase for real-time data updates to enhance the search for missing individuals. The study is based on addressing the inefficiencies in traditional missing person searches, which often suffer from outdated information and poor public engagement. The project's results indicate that integrating modern technology not only streamlines the search process but also significantly increases the accuracy of locating missing persons by utilizing user-submitted data and advanced facial recognition capabilities.

The project titled "*Finding Missing Person/Child Using AI*," published in the *International Journal of Research Publication and Reviews* in May 2023, employs a technique that integrates artificial intelligence (AI), specifically utilizing machine learning algorithms such as K-Nearest Neighbor (KNN) for facial recognition and deep learning for image analysis. The study is based on leveraging large databases of facial images alongside geolocation data to enhance the search and recovery of missing persons, particularly children. The results indicate that the developed AI-based system can efficiently identify potential matches for missing individuals, significantly reducing the time required for traditional search methods and improving accuracy. The system also aims to streamline reporting and communication processes, ultimately contributing to quicker recoveries and better support for families in distress.

The project detailed in the paper titled "*AI Based – Assisted Search for Missing Person*," published in 2023, utilizes an AI-based facial recognition technology, specifically leveraging the Amazon Web Services (AWS) facial recognition algorithm, to assist in locating missing persons. It addresses the alarming statistics of missing individuals in India, advocating for a structured approach that combines volunteer participation with police efforts, thereby streamlining the search process. The results indicate that the proposed system significantly enhances the efficiency of identifying and locating missing persons by automating the image recognition process, thereby potentially reducing the number of unresolved cases.

The project titled "*FIND MISSING PERSON USING AI (ANDROID APPLICATION)*" published in the International Research Journal of Engineering and Technology (IRJET) in May 2022, employs advanced face recognition technology based on machine learning techniques, primarily utilizing TensorFlow for its model development. The study revolves around automating the process of identifying missing persons by comparing facial features from captured images against a database of known missing individuals, facilitating quicker response times for law enforcement and families. The results indicate that the system can achieve an accuracy of approximately 77.99% in face recognition, significantly streamlining the search process compared to traditional manual methods, and integrating features like Google Maps for real-time location tracking of potential matches.

The project titled "*Finding Missing Person using Face Detection on Android Application*," published in *June 2018*, employs face detection technology as its primary technique to enhance the efficiency of finding missing persons through an Android application. The study is based on addressing the limitations of existing manual systems, which are often time-consuming and inefficient, and it proposes a streamlined approach that allows users to register complaints, view missing and found persons, and facilitate communication among trust members through a centralized web server database. The results indicate that the application successfully allows for user registration and login, provides error handling for incorrect inputs, and enables users to upload data about missing and found individuals, achieving an intended accuracy rate of 70-80% in person identification through the SWF-SIFT algorithm. Overall, the application aims to significantly improve the speed and accuracy of locating missing persons compared to previous methods.

The project detailed in the paper "*Crime Reporter and Missing Person Finder*" (2018) employs an Agile development methodology to create an Android application aimed at improving the efficiency of crime reporting and locating missing persons. This study is based on the challenges presented by the manual systems currently in place, which involve lengthy procedures for filing First Information Reports (FIR) at police stations. The application's functionality allows relatives to directly file missing person complaints, which are stored on a server accessible to trust members. The results indicate that integrating information and communication technologies (ICTs) into crime reporting can significantly enhance public safety and streamline communication between the public and law enforcement.

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