Project Batch : 3	Project Guide
Team Members: TM1:20BQ1A4216(TL), TM2:20BQ1A4249, TM3:20BQ1A4233, TM4:20BQ1A4203	B. Pardha Saradhi

Problem Statement: "AI-Powered Missing Child Locator"
Abstract:

The "AI-Powered Missing Child Locator" project introduces a cutting-edge mobile app desig[n]
revolutionize the process of locating missing children. This app leverages the capabilities of Art[ificial]
Intelligence (AI) and facial recognition technology to enhance and streamline the identificatio[n]
search process. By overcoming the limitations of the existing system, which relies on manual me[thods]
and fragmented databases, this project aims to provide a comprehensive, efficient, and user-fr[iendly]
solution.

The existing challenges in locating missing children stem from the reliance on traditional meth[ods]
identification and data management. The current system lacks a unified database and efficient [means]
of matching and verifying unattended children with reported missing cases. This project add[resses]
these shortcomings by introducing a centralized platform where citizens can easily report m[issing]
children and contribute to a shared database. The integration of AI-powered facial recog[nition]
technology enhances the accuracy and speed of identifying potential matches, thereby increasi[ng the]
chances of reuniting missing children with their families.

Through the development of this mobile app, users will experience a streamlined process of rep[orting]
missing children and receiving real-time updates on potential matches. The app's intuitive int[erface]
and interactive map display empower users to actively participate in the search efforts. By lever[aging]
AI and automation, the "AI-Powered Missing Child Locator" project offers a more efficient, sca[lable]
and accurate solution to a critical societal issue, fostering community engagement and contribut[ing to]
the well-being of children and families. This innovative app will offer a unified platform for ci[tizens]
to report unattended children and match them against a comprehensive database of missing case[s].

The main objective of the "AI-Powered Missing Child Locator" project is to develop a technolog[ically]
advanced and user-centric mobile app that harnesses the capabilities of Artificial Intelligence (A[I) and]
facial recognition technology to overcome the limitations of the existing system for locating m[issing]
children. By creating a centralized and efficient platform, the project aims to revolutionize th[e way]
missing children are identified, reported, and matched with existing databases. The app's primar[y goal]
is to enhance the speed, accuracy, and effectiveness of reuniting missing children with their fa[milies]
by providing real-time identification and notifications to users.

Through the implementation of facial recognition technology, the app will enable users to subm[it]
photos of unattended children and compare them against a centralized database of missing
children. The AI-powered matching algorithm will analyze facial features and patterns, providi[ng]
real-time results and potential matches to users within seconds.

	Members Assigned
Software Tools Required: 1. Mobile App Development Platform: Android Studio 2. Programming Language: Java or Kotlin 3. Front-End Technologies: XML and Android XML Layouts 4. Database Management System: Firebase Database 5. Version Control System: Git 6. Integrated Development Environment (IDE): Android Studio 7. Graphics and Image Editing Software: Adobe Photoshop 8. API Development Tools: Postman (if required for backend APIs) 9. Google Maps Plugin API: Google Maps SDK 10. User Interface Design Tools: Figma or Sketch 11. Testing Framework: Espresso 12. Mobile Device Emulators: Android Emulator	- TM1: Frame Works - TM2: Front- End Development - TM3: Back- End Development &Databases - TM4: Business-Logic/ Models
Development Frame Works: Android **Database Management**: Firebase **Front-End:** Android XML Layouts	TM 1, TM 2, TM 3, TM 4
Business-Logic/ Models: Machine Learning (ML), AI ,DL,NLP.	TM2, TL
Hardware Specifications: Mini Capacities for Execution of Proposed System 1. Operating System: Android or iOS 2. Processor (CPU): Quad-core or higher 3. Memory (RAM): 4 GB or higher 4. Storage (Internal Memory): 100 MB or higher 5. Display: 720x1280 pixels or higher 6. Camera: Functional rear or front camera with at least 8 MP resolution 7. Internet Connectivity: Wi-Fi or mobile data 8. GPS and Location Services	
Features in Proposing System: **Feature1:** User Registration and Authentication **Feature2**: Missing Child Report Submission **Feature3**: Facial Recognition Matching **Feature4**: Real-Time Notifications **Feature5**: Interactive Map Display **Feature6**: Search and Filter Functionality **Feature7**: Profile Management **Feature8**: Data Privacy and Security **Feature9**: Emergency Contacts Integration **Feature10**: Data Synchronization **Feature11**: Language Support **Feature12**: Community Reporting and Collaboration	

Sub Tasks for each Feature:	Time Required to Complete in Weeks
F1: User Registration and Authentication • Task 1: Design user registration UI and flow • Task 2: Implement user registration functionality • Task 3: Design authentication UI and flow • Task 4: Implement authentication functionality	2 Weeks
F2: Missing Child Report Submission • Task 1: Design missing child report UI and flow • Task 2: Implement missing child report submission	1 Week
F3: Facial Recognition Matching • Task 1: Research and select facial recognition model • Task 2: Implement facial recognition integration	2Weeks
F4: Real-Time Notifications • Task 1: Set up real-time notification system • Task 2: Implement notification triggering mechanisms	1 Week
F5: Interactive Map Display • Task 1: Design interactive map UI and features • Task 2: Implement map display and functionality	1 Week
F6: Search and Filter Functionality • Task 1: Design search and filter UI and options • Task 2: Implement search and filter functionality	1 Week
F7: Profile Management • Task 1: Design user profile management UI • Task 2: Implement profile management functionality	1Week
F8: Data Privacy and Security • Task 1: Implement data encryption and security measures **F9: Emergency Contacts Integration** • Task 1: Design emergency contacts UI and flow • Task 2: Implement emergency contacts functionality	1 Week
F10: Data Synchronization • Task 1: Set up data synchronization mechanism **F11: Language Support** • Task 1: Implement multilingual support for the app **F12: Community Reporting and Collaboration** • Task 1: Design community reporting and collaboration • Task 2: Implement community features and interactions	2 Weeks
Total Completion Tentative Time Duration	12 Weeks

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