

**School of Computer Science & Engineering**

# Department of Computer Science and Applications 2023-2024

**A**

**PROJECT REPORT**

**ON**

**Missing person face detection using ai/ml**

**BY**

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**IN PARTIAL FULFILLMENT OF**

# MASTER OF COMPUTER APPLICATION- SCIENCE DR. VISHWANATH KARAD MIT WORLD PEACE UNIVERSITY, PUNE-411038



**DEPARTMENT OF COMPUTER SCIENCE AND APPLICATIONS**

Certificate

This is to certify that**,** **Martin S , Gaurav Thakare , Aditya Turkhade**

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## ACKNOWLEDGEMENT

For Example

I wish to express my gratitude for providing the facilities of the Institute and for his encouragement during the course of this work. I would also 1ike to gratefully acknowledge the enthusiastic supervision of my internship guide, Prof. (Dr.) C. H. Patil, the Head of the School, School of Computer Science, MIT-WPU, Pune for his continuous, valuable guidance, patience, constant care, and kind encouragement throughout the internship work that made me present this internship report in an efficient manner.

I would like to thank my industry mentors Mr. Aravind Krishnamurthy and Mr. Vipin Patil for providing me with guidance and help on every step of the way during this internship and for imparting me with invaluable knowledge and teaching me the etiquettes of a professional employee.

Final1y, I wish to thank my family members and my friends who have always been very supportive and encouraging.

Name: **Martin S , Gaurav Thakare , Aditya Turkhade**

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## DECLARATION

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I hereby declare that the project work entitled **“Asset Management System”** submitted to the MIT-WPU, Pune is a record of an original work done by me under the guidance of Mr. Vipin Patil and this project work is submitted in the partial fulfilment of the requirements for the internship and the award of the degree of Master of Computer Application.

The results embodied in this internship report have not been submitted to any other University or Institute for the award of any degree or diploma. I have contributed myself for this project going on in our company.

Sign

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**Chapter 1: INTRODUCTION Chapter 2: PROPOSED SYSTEM Chapter 3: ANALYSIS AND DESIGN Chapter 4: USER MANUAL Chapter 5: CONCLUSION**

**Chapter 1: INTRODUCTION**

**1.1 Existing System**

The existing systems for identifying missing persons primarily rely on manual methods, including sharing posters, media announcements, and social media campaigns. These methods are time-consuming, prone to human error, and often yield low success rates in locating missing individuals, especially over extended periods or across large geographical areas. There is a significant need for technological intervention to improve the efficiency and accuracy of finding missing persons.

**1.2 Problem Definition - Need of Computerization**

Given the limitations of current manual methods, there is a pressing need for a computerized system that leverages advanced AI and machine learning (ML) techniques to detect and identify missing persons' faces from various sources such as CCTV footage, social media images, and public databases. The integration of AI/ML can significantly enhance the speed and accuracy of identifying missing persons, thereby increasing the chances of reuniting them with their families.

**Chapter 2: PROPOSED SYSTEM**

**2.1 Proposed System**

The proposed system uses AI and ML technologies to develop a robust face detection system tailored specifically for identifying missing persons. This system will utilize convolutional neural networks (CNNs) and other advanced image processing techniques to analyze and match facial features from different image sources.

**2.2 Objectives of System**

* To develop an AI/ML-based system capable of accurately detecting and identifying faces of missing persons.
* To integrate the system with various image sources such as CCTV footage, social media platforms, and public image databases.
* To create an efficient and user-friendly interface for law enforcement and public use.
* To enhance the overall efficiency of missing person identification processes, reducing the time taken to locate and identify individuals.

**2.3 User Requirements**

* The system should be able to handle large volumes of images efficiently.
* It should provide real-time detection and identification results.
* Users should be able to upload images for analysis easily.
* The system should ensure data privacy and security.

**2.4 Operating Environment – Hardware and Software**

* **Hardware Requirements:** High-performance server with GPU support, high storage capacity.
* **Software Requirements:** Python, , OpenCV, Flask/Django for web interface, and a robust database management system like PostgreSQL.

**Chapter 3: ANALYSIS AND DESIGN**

**3.1 ERD, UML Diagram**

* **Entity-Relationship Diagram (ERD):** Visual representation of the system's data model.
* **UML Diagrams:**
  + **Class Diagram:** Illustrates the system's classes and their relationships.
  + **Use Case Diagram:** Depicts the system's functional requirements.
  + **Sequence Diagram:** Shows the interactions between system components over time.
  + **Activity Diagram:** Visualizes the workflow of the system.
  + **Component Diagram:** Details the system's structural components.
  + **Deployment Diagram:** Illustrates the physical deployment of system components.

**3.2 Table Design (if applicable)**

Design of database tables to store user data, image metadata, and matching results.

**3.3 Data Dictionary (if applicable)**

Definition of data elements, their types, and relationships.

**3.4 Input and Output Screen Shots**

Screenshots of user interfaces for uploading images, viewing results, and system dashboards.

**3.5 Reports (if applicable)**

Automated reports generated by the system, including matching results and performance metrics.

**3.6 Test Procedures and Implementation (if applicable)**

Details of test cases, procedures for testing system functionality, and implementation plans.

**Chapter 4: USER MANUAL**

**4.1 User Manual**

Step-by-step instructions on how to use the system, including image upload, results interpretation, and system navigation.

**4.2 Menu Explanation**

Explanation of system menus and their functionalities.

**Chapter 5: CONCLUSION**

**5.1 Limitations & Drawbacks**

Discussion of the system's limitations, such as image quality dependency and computational resource requirements.

**5.2 Future Enhancement**

Potential improvements and additional features to enhance system performance and capabilities.

**5.3 Conclusions**

Summary of the project's achievements, impact, and overall effectiveness.

**5.4 References & Bibliography**

List of all references and resources used in the project.