AMAR H M

AI & ML engineer
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PROFESSIONAL SUMMARY

AI & Machine Learning Engineer with hands-on experience in computer vision and natural language processing. Developed practical AI systems including real-time CCTV crime detection and email classification applications. Strong foundation in Python, deep learning frameworks, and data processing, focused on building AI solutions for real-world problems.

EDUCATION

B.Tech – Artificial Intelligence & Machine Learning (CSE)
Dayananda Sagar University, Bengaluru, Karnataka | 2023 – 2026

Diploma – Electronics & Communications Engineering
SCT Polytechnic, Bengaluru, Karnataka | 2020 – 2023

SSLC – State Board of Karnataka
New Indus Valley Residential School, Karnataka | 2019 – 2020

TECHNICAL SKILLS

Programming: Python, SQL, HTML, CSS

Machine Learning: Data Processing, Data Preprocessing, Feature Extraction, Supervised Learning, Unsupervised Learning, Neural Networks, Natural Language Processing, Computer Vision

Frameworks & Libraries: PyTorch, TensorFlow, Scikit-learn, OpenCV, NLTK, HuggingFace

Tools & Platforms: Git, VS Code, Jupyter Notebook, FastAPI, Streamlit, Excel, Power BI, MS Office

Additional Skills: Communication, Teamwork, Adaptability, Time Management, Problem Solving

PROJECTS

CCTV Crime Detection System (Deep Learning Video Analytics)

- Designed a multi-stage real-time CCTV analytics pipeline for detecting suspicious and criminal activities from live video streams.
- Implemented motion-based filtering and data preprocessing to reduce unnecessary inference, followed by deep learning models using using MobileNetV2, ResNet18, and R3D-18 for progressive classification.
- Developed temporal clip-based inference and sliding-window logic for event-level crime detection.
- Built a live monitoring dashboard using Streamlit with alert logging and operator review interface.

Tech Stack: Python, PyTorch, OpenCV, Streamlit, Deep Learning, Computer Vision

Email Phishing Detection System (MLOps Pipeline)

- Developed end-to-end phishing email detection pipeline with automated IMAP-based data ingestion.
- Built modular prediction pipeline with preprocessing, vectorization, and model inference.
- Implemented prediction logging and data drift monitoring for model performance tracking.
- Deployed interactive Streamlit dashboard for real-time prediction and analysis.
- Containerized workflow using Docker for reproducible deployment.

Tech Stack: Python, Scikit-learn, NLP, Streamlit, Docker, MLOps, IMAP, Pandas

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Email Classification System (Natural Language Processing)

- Developed an NLP-based email classification system to automatically categorize incoming emails using supervised machine learning.
- Implemented email fetching and parsing using IMAP protocol and processed email content through text preprocessing and feature extraction.
- Integrated trained machine learning model with a Flask-based web application for real-time classification and result visualization.
- Added confidence-based prediction filtering and automated CSV export for classified emails.

Tech Stack: Python, Scikit-learn, NLTK, Flask, Natural Language Processing, Machine Learning

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Smart Attendance System (Computer Vision)

- Developed an automated attendance system using real-time face detection and recognition techniques.
- Implemented face encoding and identity matching using OpenCV and face recognition libraries for live webcam-based attendance marking.
- Automated attendance logging with time-based status classification (Present / Late) and daily report generation.
- Generated attendance summaries with percentage calculation and conditional formatting, along with automated email alerts for absentees and low attendance.

Tech Stack: Python, OpenCV, Face Recognition, Pandas, Computer Vision, Automation

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INTERNSHIP EXPERIENCE

Gravity India Pvt. Ltd.
IoT Industrial Orientation Internship | 3 Months (2023)

- Attended technical sessions on company operations, IoT systems, and industry workflows.
- Learned about IoT applications in buildings, including smoke detectors, CPU servers, and cloud-based monitoring.
- Gained exposure to IoT device integration, data flow, and real-time alert mechanisms.

Elevate Labs (Online)
AI & ML Intern | 3 Months (2026)

- Completed foundational training in Python programming and problem-solving through structured coding tasks.
- Worked on machine learning mini-projects involving data preprocessing, model building, and evaluation using Python and Scikit-learn.
- Participated in technical interview preparation sessions covering ML concepts, coding logic, and problem-solving approaches.
- Gained practical understanding of machine learning workflow from development to model evaluation.

Hindustan Aeronautics Limited (HAL)
1 Month | (2026)

- Worked as part of an engineering team on an internal technical project under supervision.
- Assisted in analysis, testing, and implementation tasks following industry standards and workflows.
- Gained exposure to real-world engineering processes, documentation practices, and system-level problem solving.
- Learned professional practices related to project confidentiality, collaboration, and structured development environments.

COURSES & CERTIFICATION

Advanced AI & ML Program (Offline)
9 Global Technologies | Aug 2025 – Feb 2026 (Ongoing)

- Python Programming, SQL, Statistics, Machine Learning (Supervised & Unsupervised)
- Data preprocessing, visualization, and analysis using Excel and Power BI
- Deep Learning concepts and machine learning project development

Infosys Springboard

- IoT 101, IoT 201
- Introduction to Python

Coursera

- Artificial Intelligence: An Overview
- Ethics of Artificial Intelligence
- Machine Learning: An Overview
- AI Technologies and Platforms

Wadhwani Foundation

- Ignite Bootcamp – Idea to Plan (2025)

LANGUAGES

- Kannada
- English
- Hindi
- Telugu

HOBBIES & INTERESTS

• Building new applications and exploring emerging technologies

• Video and photo editing

• Playing cricket and volleyball

• E-sports and competitive gaming
