

ISHITA P ACHARYA

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EDUCATION

Mangalore Institute of Technology and Engineering (MITE) Nov 2022 - May 2026

Bachelor of Engineering in Computer Science - (Current GPA 7.92 / 10.0) Moodabidre, Karnataka, India

SKILLS AND CERTIFICATIONS

Programming Languages: C, Python, JavaScript.

AI/ML & NLP: Scikit-learn, PyTorch, TensorFlow, Model Evaluation (Precision, Recall, F1-score), OpenCV, Tesseract OCR, Conversational AI, Image Preprocessing, MediaPipe, NumPy, Pandas, RAG, Vector Embeddings, Semantic Search, Hybrid Search, Prompt Engineering, Retrieval Pipelines, Isolation Forest, Anomaly Detection, Multi-Agent Systems.

LLM & AI Tools: LangChain, Hugging Face, Ollama, ChromaDB, Sentence Transformers, BM25 (rank-bm25), Pdf2Image, Streamlit, Langfuse, MCP, Litellm,

Frameworks & Libraries: React.js, HTML5, CSS3, Bootstrap, Laravel, Node.js, Flask, FastAPI, REST APIs.

Databases: MySQL, MongoDB.

Cloud, DevOps & Systems: AWS EC2, S3, Ubuntu, Linux, Git, GitHub, REST API Design, JWT Authentication.

Certifications: Cyber Job Simulation (Delloite), PAD using Machine Learning - IJARCCCE.

WORK EXPERIENCE

Software Engineer Intern | Udupi Web Solutions

Customer Support System CRM/ERP

Jan 2026 - May 2026

- * Developed a **Customer Support System** using **Laravel, PHP, MySQL, HTML, CSS, Bootstrap, and Tailwind CSS**, implementing secure user authentication, customer/support record management, and CRUD operations following the MVC architecture.
- * Designed responsive dashboards with **search, filtering, reporting, notifications, and data visualization** features, while performing database integration, debugging, validation, and application testing to improve system performance and reliability.

ACADEMIC PROJECTS

Multi-PDF AI System (Personal Project)

April 2026 - Present

- * Developed a privacy-focused Retrieval-Augmented Generation (RAG) application using Python, LangChain, Ollama, ChromaDB, and Streamlit for intelligent question-answering, document summarization, and information extraction across multiple PDFs.
- * Implemented a hybrid retrieval pipeline using BM25, ChromaDB vector search, and Reciprocal Rank Fusion (RRF) with local LLM inference, enabling accurate, fully offline document intelligence with source-cited responses.

AI Security Log & Incident Agent (Personal Project)

June 2025 - June 2026

- * Developed a Python-based security log analysis pipeline using regex parsing, rule-based detection, and Isolation Forest to analyze SSH, web server, and firewall logs for anomaly detection and threat identification.
- * Built a LangChain and Hugging Face-powered incident triage system that mapped threats to the MITRE ATT&CK framework, assigned severity levels, generated analyst-ready reports, and incorporated robust fallback and error-handling mechanisms.

Peripheral Arterial Disease Detection Using Machine Learning (Team Project - 4)

March 2025 - November 2025

- * Developed an end-to-end machine learning pipeline for Peripheral Arterial Disease (PAD) detection by integrating Tesseract OCR, feature extraction, and a Random Forest classifier with SMOTE to improve classification performance.
- * Built and deployed a Flask-based web application for automated clinical report processing, enabling real-time OCR, ML inference, and interpretable disease prediction.

ZOE AI Voice Assistant (Personal Project)

February 2025

- * Developed an AI-powered voice assistant using Python and Flask, integrating Speech Recognition for real-time voice command processing and natural language interaction.
- * Integrated OpenAI and ElevenLabs APIs to enable intelligent conversational responses and realistic text-to-speech, delivering a seamless voice-based user experience.