VETRI KALANJIYAM

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PROFESSIONAL SUMMARY

Computer Science and Design undergraduate specializing in AI/ML, backend development, and applied software engineering. Experienced designing and deploying AI-powered applications, RAG pipelines, automation workflows, and backend systems using Python, JavaScript, and modern AI frameworks. Selected among the Top 100 teams nationally (out of 52,000+ developers) in the Meta PyTorch OpenEnv Hackathon for an autonomous AI email triage system. Completed a 90-day dual-track internship spanning full-stack web development and applied AI/RAG systems.

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, SQL, HTML, CSS

Backend Development: Node.js, Express.js, FastAPI, REST APIs, Microservices

AI & Machine Learning: PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, CNNs, Reinforcement Learning

AI Engineering: LLMs, RAG, FAISS, Hugging Face, LangChain, Vector Search, Prompt Engineering, Groq

Databases: MySQL, MongoDB, PostgreSQL, Supabase

Cloud & DevOps: AWS, Azure, Docker, Git, GitHub, Linux

Tools & Platforms: Streamlit, Unreal Engine 5, n8n, React, System Design

EDUCATION

B.Tech., Computer Science and Design *Sept 2024 – Present*
SNS College of Engineering, Coimbatore, India | CGPA: 8.4 / 10

Relevant Coursework: Data Structures & Algorithms, OOP, Database Management Systems, Operating Systems, Artificial Intelligence, Machine Learning

EXPERIENCE

Dual-Track Intern — Software Development & Artificial Intelligence *2026 (1-year internship)*
SNS iHub, Coimbatore

- Completed a 90-day dual-track internship spanning full-stack web development and applied AI, delivering projects in both tracks.
- Web Development track: built full-stack applications using HTML, CSS, JavaScript, React, Node.js, and MongoDB.
- AI track: developed Retrieval-Augmented Generation (RAG) systems, a rule-based chatbot, and worked with Minimax AI models.
- Prepared a full internship presentation and detailed markdown report summarizing project outcomes and technical learnings.

AI & Data Analytics Intern *July 2025 – August 2025*
AICTE | Shell India | Edunet Foundation

- Processed and analyzed 10,000+ energy-sector records, improving data processing efficiency by 15%.
- Developed predictive analytics models achieving 90% accuracy using machine learning techniques.
- Collaborated within a four-member engineering team to deliver AI-driven analytical solutions.

Web Development Intern *July 2025 – August 2025*
VaultofCodes (Remote)

- Refactored legacy application modules, reducing technical debt by 10%.
- Fixed 15+ production issues across frontend and backend systems.
- Implemented responsive UI improvements, increasing mobile engagement by 25%.

PROJECTS

EETRE — Enterprise Email Triage & Response Environment *Mar 2026 – Apr 2026*
Meta PyTorch OpenEnv Hackathon × Scaler Grand Finale — Top 100 of 52,000+ developers

- Built an autonomous email triage benchmark environment with a 4-tier difficulty system and spam/phishing detection.
- Trained a SmartEmailAgentBrain agent on Qwen2.5-0.5B using GRPO (Group Relative Policy Optimization), deployed to Hugging Face Spaces.
- Cleared Round 1 of the national hackathon and advanced to the Bangalore Grand Finale.

Research Paper Answer Bot — RAG Capstone
Analytics Vidhya GenAI Pinnacle Program

- Built an end-to-end Retrieval-Augmented Generation pipeline using FAISS for vector search and Groq as the LLM backend.
- Compared multiple embedding and retrieval strategies to optimize answer relevance and latency.

Conversational AI for Crime Database
Karnataka State Police Hackathon 2026

- Designed a full deployment architecture on Catalyst by Zoho with role-based access control (RBAC) and ML-driven case intelligence.

AI Founder-Story Reel Generator
n8n Automation Pipeline

- Built a complete n8n workflow generating AI-powered founder story reels using Groq's Llama models, Google Sheets, Docs, and Gmail.

Plant Disease Detection using Deep Learning

- Built a CNN achieving 95% prediction accuracy on plant disease classification.
- Developed an interactive Streamlit application for real-time disease prediction, with inference under 2 seconds per image.

EV Adoption Forecasting Dashboard

- Analyzed 50,000+ vehicle registration records spanning seven years to build ML forecasting models achieving 85% accuracy.
- Designed interactive dashboards that reduced stakeholder analysis time by 40%.

ACHIEVEMENTS

- Top 100 Finalist — Meta PyTorch OpenEnv Hackathon (out of 52,000+ developers)
- Completed a 90-day dual-track internship in Web Development and Artificial Intelligence at SNS iHub
- Built multiple production-oriented AI applications, RAG pipelines, and backend systems
- Unreal Engine 5 developer with experience building game environments

CERTIFICATIONS

- Generative AI Fundamentals — Databricks
- AWS APAC Solutions Architecture Job Simulation — Forage
- AICTE Skills4Future – AI & Data Analytics
- Agile & Scrum Fundamentals

ADDITIONAL INFORMATION

Languages: English, Tamil, German
Areas of Interest: Artificial Intelligence, Backend Engineering, Distributed Systems, Machine Learning, Reinforcement Learning, Cloud Computing, System Design, AI Agents