

Kalyani Rohidas Vaidya

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EDUCATION

Master of Science in Computer Science

GPA: 3.6

Central Michigan University, Mount Pleasant, MI

Jan 2024 -Dec 2025

Coursework: Software and data modeling, Application development, Database and Management System, Machine Learning, Artificial Intelligence, Applied Data Engineering, Cloud Computing, Design & Analysis of Algorithms, Data Structures.

Bachelor of Engineering in Information Technology

GPA: 3.9

Savitribai Phule Pune University, Maharashtra, India

July 2018 -May 2022

Coursework: Object-Oriented Programming, Computer Networks, Computer Operating System, Cyber Security.

TECHNICAL SKILLS

Programming Languages: Java, Python, C++, C, JavaScript, TypeScript, PowerShell.

Framework and Libraries: LLMs, Generative AI, FastAPI, Django, TensorFlow, PyTorch, Scikit-Learn, React.js, Next.js, Spring Boot.

Cloud and DevOps: AWS (EC2, RDS), Microsoft Azure, Docker, Kubernetes, Apache Kafka, Jenkins, Git, RESTful APIs.

Database: SQL, PostgreSQL, MongoDB, Redis.

Security & Monitoring: Microsoft Defender, Elastic Stack, Dockerized Sandboxing, Wireshark, Nmap, Metasploit.

Core CS: Strong foundation in Data Structures, Algorithms, Operating Systems, Distributed Systems and Systems Programming.

EXPERIENCE

Security Analyst-Software & Automation [(Python, Docker, Apache Kafka, cloud-native automation.)]

August 2024 – Current

Central Michigan University, Michigan, USA

- Engineered **scalable event-driven backend frameworks** using Python, Kafka, and Microsoft Graph API to **automate multi-tenant data flows**, enhancing **system performance, observability, and scalability** while reducing manual triage workload by 70%.
- Designed Kafka-based data pipelines** integrating **multi-source event streams** into **Elastic Stack**, enabling **real-time analytics (10K+ events/day)** with **sub-second latency**.
- Built Python anomaly detection system** using **pandas, OOP, and ML algorithms**, achieving **90% accuracy** on large-scale event streams.
- Automated ETL and CI/CD workflows on AWS and Azure** boosting data throughput by **30%** and ensuring reliable real-time deployments.
- Applied LLMs and agent frameworks** to integrate **AI-driven analytics and workflow automation** into real-time systems.

Software Development Engineer| (Docker, Kubernetes, Java, Python, NLP, Fast API, Flask, REST APIs)

August 2022 -Nov 2023

APRG Technologies Pvt. Ltd, Pune, India

- Designed **REST APIs and microservices** in **Java/Python**, containerized with **Docker + Kubernetes** for **large-scale applications** with **high availability, load balancing, and fault tolerance**.
- Built **AI-powered services** on **AWS (EC2, Lambda, SageMaker)** with **real-time inference**, reducing response **latency** by **50%**.
- Developed **CI/CD pipelines and automated test suites** with GitHub Actions and Kubernetes, cutting release cycles by 65% while ensuring **secure, performance-tested deployments**.
- Optimized **backend systems** using **data structures, concurrency techniques**, and **OOP refactoring**, achieving **3x throughput**, reduced costs, and improved scalability.[Link](#)
- Integrated **NLP modules** with **FastAPI/Flask** into **production APIs**, enhancing **information retrieval** and **real-time classification** in **scalable software services**.

ACADEMIC PROJECTS

ShopSphere – Full-Stack E-Commerce App | Full-Stack Developer | [GitHub](#)

May 2025 – June 2025

- Built **full-stack e-commerce app** with **FastAPI, Next.js 14, PostgreSQL, Docker, JWT auth, role-based access, and checkout**.
- Created **Next.js + Tailwind CSS frontend** (95+ Lighthouse) and containerized with **Docker Compose**, reducing setup time by **~70%**.

AI- Powered Fashion Design Assistant| Team lead | [GitHub](#)

Dec 2024- Jan 2025

- Implemented **GAN-based image synthesis (TensorFlow/PyTorch)** on **distributed GPUs**, achieving **90% realism** and **60% efficiency**.
- Built and deployed **real-time web app** using **Django on AWS serverless**, reducing costs by **40%** and enabling **AI sketch rendering**.

PUBLICATION

- F. Dimitrievski, S. Khan, K. Vaidya, and R. Gargees. *EcoBeanAI: Predictive Modeling of Climate Effects on Coffee and Cocoa Yield*. **Accepted at IEEE AIBThings 2025, co-organized by Central Michigan University and Istinye University, Türkiye.** [Link](#)
- Vaidya, Kalyani. (2023). Real Time COVID-19 Tracker Using React JS. International Journal of Science and Research (IJSR). 12. 1113-1116. 10.21275/SR23414181855. [Link](#)
- Vaidya, K., Suryawanshi, S., Mulay, S., & Kulkarni, N. P. *Performance Evaluation of Machine Learning for Forest Fire Modeling and Prediction*. *International Journal of Advanced Research in Science, Communication and Technology*, Vol. 2, No. 5, May 2022. [Link](#)

CERTIFICATION

- Oracle Cloud Infrastructure 2025 Developer Professional (1Z0-1084-25) – Oracle, 2025** [Link](#)
- Oracle Cloud Infrastructure 2025 Generative AI Professional (1Z0-1127-25) – Oracle, 2025** [Link](#)
- AWS Academy Graduate – Cloud Foundations** [Link](#)