ROHITH PAVULURU

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PROFESSIONAL SUMMARY

Senior Full-Stack Engineer with 5+ years of experience in **Python development, enterprise system integration**, and **AI/ML frameworks**. Specializing in **ERP systems, agentic AI workflows**, and **distributed systems architecture**, I build scalable solutions that integrate **LLM technologies with real-world enterprise platforms**. Proven track record in **backend API development, React/TypeScript frontends**, and **production-ready AI system deployment**.

TECHNICAL EXPERTISE

- **Programming Languages:** Python, JavaScript, TypeScript, Java, SQL, Go, C++.
- **AI & ML Frameworks:** PyTorch, Scikit-learn, OpenAI API, Azure OpenAI, LangChain, Semantic Kernel, RAG, Vector Databases.
- **Frontend Technologies:** React, Next.js, TypeScript, Angular, MUI, Tailwind CSS, HTML5, CSS3.
- **Backend & APIs:** Django, Node.js, RESTful APIs, SOAP APIs, Microservices, Distributed Systems, Asynchronous Processing.

- **Databases:** SQL (MySQL, PostgreSQL), NoSQL (MongoDB), Snowflake, Vector Databases (Pinecone, Weaviate).
- **Cloud & DevOps:** AWS (Lambda, S3, IoT Core, SageMaker), Docker, Kubernetes, CI/CD, Infrastructure as Code, Observability.
- **Enterprise Systems:** ERP Integration (NetSuite, SAP, D365), Schema Mapping, Authentication, Rate Limiting, Workflow Orchestration.

EDUCATION

Master of Science in Computer Science | Indiana University Bloomington | GPA: 3.97 | May 2025
Bachelor of Engineering in Computer Science | BMS Institute of Technology and Management | CGPA: 9.11 | May 2023

PROFESSIONAL EXPERIENCE

Indiana University Bloomington — Bloomington, United States
Senior Software Engineer — *January 2025 - July 2025*

- Built **intelligent workflow orchestration system** using **Python** and **AWS cloud services** for automated quiz generation, processing 1,000+ unique user interactions with **3x improvement in qualitative feedback** collection.
- Developed **full-stack application** with **React/TypeScript frontend** and **Python backend APIs**, implementing **drag-and-drop functionality** and real-time data processing for enterprise-scale deployment.
- Designed **scalable system architecture** with **asynchronous processing** and **distributed job queues**, ensuring high availability and performance for research and production environments.

Nokia Solutions and Networks — Bengaluru, India
DevOps Engineer — *February 2023 - July 2023*

- Architected **large-scale monitoring solutions** using **Kafka, Grafana**, and **distributed systems**, improving system reliability by **22%** and implementing comprehensive **observability** with logs, traces, and metrics.
- Built **CI/CD pipelines** with **Kubernetes, Docker**, and **Infrastructure as Code**, accelerating deployments by **25%** and achieving **50% reduction in container image sizes** through optimization.
- Implemented **enterprise-grade testing strategies** with **automated testing frameworks**, maintaining **92.4% code coverage** and ensuring resilient distributed system performance.

Nano Robotics Embed Technologies — Bengaluru, India
Machine Learning Engineer — *July 2022 - October 2022*

- Deployed **production ML systems** using **AWS (IoT Core, Lambda, SageMaker)** and **Bayesian Neural Networks**, improving forecasting accuracy by **12%** while processing **1M+ real-time data points**.
- Built **intelligent alert system** with **API integrations** and **workflow orchestration**, implementing **real-time notifications via Twilio API** for 10km radius coverage enhancing public safety.

Pramahasoft Solutions Pvt Ltd — Hyderabad, India
Backend Engineer - ERP Systems — *February 2021 - June 2022*

- Designed **enterprise ERP integration systems** using **Python** and **REST/SOAP APIs**, processing 200,000+ transactions hourly with **98.92% data accuracy** through **schema mapping** and **rate limiting**.
- Implemented **real-time data streaming** and **workflow automation** using **Python, SQL**, and **enterprise APIs**, eliminating manual interventions and building resilient **distributed data pipelines**.
- Built **scalable backend services** with **Snowflake integration**, creating 50+ automated dashboards and accelerating report generation by **40%** while handling **2x larger enterprise datasets**.

KEY PROJECTS

Enterprise Learning Management System

- Engineered **full-stack enterprise application** with **Firebase, AWS**, and **multi-factor authentication** using **Google API** and **Duo Authentication API**, serving educational institutions with secure, scalable architecture.
- Built **workflow orchestration system** with **differentiated user dashboards**, **asynchronous processing**, and **enterprise-grade security**, collaborating in **Agile development** environment for production deployment.

AI-Powered Duplicate Detection System

- Developed **production NLP system** using **Python, Django**, and **machine learning algorithms**, achieving **95% accuracy** in duplicate detection and reducing processing time by **40%** across enterprise workflows.
- Deployed **enterprise-scale application** serving **1,000+ users** across 5 departments with **4.8/5 user satisfaction score**, demonstrating expertise in **scalable system design** and **production AI deployment**.