

Abhishek Potdar

Raleigh, NC • apotdar@ncsu.edu • linkedin.com/in/abhishek-potdar-2106 • github.com/Abhi0010

PROFESSIONAL SUMMARY

Software Engineer with 2+ years of experience building scalable full-stack and distributed systems across manufacturing, government, and AI security domains. Engineered solutions reducing API latency by 90% and cutting processing time by 60% in production. Experienced in cloud-native migrations, CI/CD automation, and LLM-based agent pipelines.

TECHNICAL SKILLS

Languages: Python, Java, C, C++, C#, Go, SQL, HTML, JavaScript, TypeScript

Frameworks: React.js, Angular, Spring Boot, Django, FastAPI, Node.js, .NET Core

Databases: MS SQL, MongoDB, PostgreSQL, Redis, MySQL

Cloud & Tools: AWS, GCP, Azure, Docker, Kubernetes, Ansible, Databricks, Linux, Git, Spark, GraphQL, Kafka

ML & AI: LangChain, RAG, TensorFlow, PyTorch, OpenCV, GitHub Copilot, OpenAI APIs, Hugging Face

WORK EXPERIENCE

Software Engineer Intern, M Systems International, Durham, NC May 2025 - Present

- Developed a real-time production module using Angular and Spring Boot, improving visibility across 10+ manufacturing lines.
- Deployed automated alerting systems that reduced incident discovery time by 25% for high-availability factory operations.
- Architected a multithreaded C# tool to concurrently parse and route CAD files, increasing machine throughput by 40%.
- Optimized Hibernate and JPA layers to eliminate N+1 bottlenecks, cutting P99 latency from 15s to 1.5s in production.
- Modernized legacy .NET and Java 8 APIs to Java 17 and Azure, cutting infrastructure maintenance overhead by 35%.
- Refactored monolithic builds into Maven lifecycles, reducing build time by 50% and enabling fully automated deployments.

Software Engineer, Deloitte USI, Bangalore, India Nov 2022 - Jul 2024

- Designed distributed Python microservices using FastAPI and Pydantic, exposing REST APIs to reduce latency by 40%.
- Built a Kafka and Databricks PySpark pipeline to ingest IoT telemetry from a Smart Factory, cutting processing time by 60%.
- Developed a KPI dashboard tracking equipment efficiency and yield metrics from ETL data, driving \$590K in cost savings.
- Enhanced system uptime by 25% via Redis caching and tuned SQL stored procedures for read-heavy manufacturing workloads.
- Launched a React.js and Docker platform streamlining unemployment insurance claim reporting for 100,000+ claimants.
- Automated CI/CD workflows using GitHub Actions and AWS ECS, cutting deployment cycle time by 35%.

Software Engineer - Research Assistant, K. J. Somaiya College of Engineering, Mumbai, India Jan 2022 - Jun 2022

- Led a team of 6 to develop a YOLOv5 object detection system for LiDAR assistive tech, achieving a 93% detection accuracy.
- Scaled detection services via Flask and AWS Lambda, supporting real-time inference across 10 concurrent image streams.

Software Engineer Intern, Arcon TechSolutions, Mumbai, India Jan 2021 - Jul 2021

- Revamped a server administration portal using Angular and Node.js, streamlining workflows for 15+ system administrators.
- Patched VAPT security vulnerabilities and implemented JWT token-based authentication, reducing attack vectors by 30%.

PROJECTS

LLM-Powered C/C++ Security Patching Pipeline - Python, LangChain, PyTorch

- Architected a multi-agent LangChain and CodeLlama pipeline for C/C++ patching, reducing high-severity CVEs by 40%.
- Integrated RAG using a FAISS vector DB to fetch context-aware repair patterns, reducing hallucination rate by 30% vs. baseline.
- Demonstrated 85% compilation success rate on 90+ C/C++ test cases, validating patching reliability at scale.

Microservices CI/CD & DevSecOps Platform - GitHub Actions, Docker, Ansible, Grafana

- Orchestrated a CI/CD ecosystem using GitHub Actions and Ansible to reduce software delivery cycles by 30%.
- Enforced supply chain security via npm audit and Docker segmentation, eliminating 10+ critical vulnerabilities pre-deployment.
- Deployed observability with Prometheus, Loki, and Grafana using Kubernetes Ingress, enabling zero-downtime dark launches.

PackTravel: Off-Campus Carpool Full-stack App - React, Django, MongoDB, JavaScript

- Engineered a Django and MongoDB carpooling app for 1,000+ students, leveraging sharding to support peak loads.
- Established Kafka-based notification services and achieved 90% test coverage via Pytest to ensure system reliability.
- Integrated Google Maps API for routing and built a Linear Regression fare prediction model achieving 92% accuracy.

EDUCATION

Master of Science in Computer Science Aug 2024 - May 2026

North Carolina State University, Raleigh, USA

GPA: 3.8/4.0

Coursework: Data Structures & Algorithms, Database Management, DevOps, Generative AI, Software Security

Bachelor of Technology in Information Technology Aug 2018 - May 2022

University of Mumbai, India

GPA: 8.9/10

CERTIFICATIONS & ACHIEVEMENTS

- Amazon Web Services Certified Cloud Practitioner | Databricks Certified Data Engineer Associate
- Outstanding Performance Award, Deloitte USI | Published research paper - [IEEE ICACCM 2022](#)