SARVESH SIRAS

sarveshsiras@gmail.com • (412) 918-9840 • linkedin.com/in/sarveshsiras/ • www.sarveshsiras.github.io/

EDUCATION

Carnegie Mellon University — Pittsburgh, PA
Master of Information Systems Management (GPA: 4.05) (Dean's List) — Aug 2024 - Aug 2025
Coursework: Distributed Systems, Machine Learning in Production, Data Structures and Algorithms, Introduction to Deep Learning, Object Oriented Programming in Java, Design Thinking, Statistics, Generative AI Lab

College of Engineering Pune (COEP) Technological University — Pune, India
Bachelor of Technology (B.Tech.), Information Technology (GPA: 3.61) — Aug 2017 - May 2021
Coursework: Data Structures and Algorithms, Distributed Systems, Principles of Programming Language, Computer Networks, Operating Systems, Database Management Systems, Software Engineering

PROFESSIONAL EXPERIENCE

Mastercard — Pune, India
Software Development Engineer II — July 2021 - July 2024

- Engineered secure, fault-tolerant REST and Async APIs for a cloud based global tokenization platform capable of handling **1500** transactions/second that enhanced notification rate for platforms like **Apple Pay**, **Samsung Pay**, **Amazon Pay**, etc. by **50%**
- Spearheaded migration to microservices architecture, improving scalability and performance of the system
- Leveraged tools like Splunk and Dynatrace to analyze the performance of critical features, identifying and resolving bottlenecks to enhance overall system efficiency **3 times**
- Partnered cross-functionally with product managers and engineers to define technical requirements, plan **Agile** sprints, and ship high-impact software features, and accelerating delivery timelines
- Excelled in a fast-paced, dynamic environment by managing multiple concurrent projects and leading detailed code reviews, resulting in **improved code quality**, reduced development time by **60%**

Mastercard — Pune, India
Software Engineer Intern — May 2020 - June 2020

- Partnered with the Operations and Technology team to develop an e-commerce REST application using technologies like Spring boot, Java, React, and H2 for in-house enterprise applications
- Devised mocking framework to enable Rapid Application Development that reduced prototyping time by **50%**

SKILLS & CERTIFICATIONS

Programming Languages: C, C++, Java, Python, SQL, HTML, CSS, JavaScript
Technological Skills: Spring Boot, Git, Kafka, Splunk, Dynatrace, Linux, CI/CD, LLMs, SDLC, Spark, AWS, NoSQL, MongoDb
Certifications: IBM Machine Learning Professional Certificate, Specialization in Python by University of Michigan

PROJECTS

RegHealth Navigator — May 2025 - Aug 2025

- Engineered an AI-powered compliance assistant for Medicare policy analysis using RAG architecture with OpenAI APIs and FAISS-based vector search
- Architected Flask-based backend APIs for Q&A, summarization, and document comparison modules
- Optimized regulation analysis workflows, reducing time and cost by **53%** while achieving **95%** accuracy

Production-Ready Movie Recommendation System — Jan 2025 - May 2025

- Designed a movie recommendation system using collaborative filtering, serving **1M+** users with Python/Flask, achieving **99%** service availability, handling **more than 2K** daily requests with **<800ms** latency
- Designed modular ML pipeline with Kafka-based ingestion, feature engineering, and model training using Python
- Automated infrastructure testing and CI/CD with Jenkins and pytest, achieving 90%+ code coverage
- Containerized services with Docker and implemented rolling updates, Prometheus-Grafana monitoring, and A/B testing infrastructure and load balancing using Kubernetes
- Enhanced model resilience by analyzing telemetry data for fairness, bias detection, and mitigating security risks

LEADERSHIP & VOLUNTEERING

CMU AI Club, CMU Chess Club — Aug 2024 - Aug 2025
Pro Bono Consultant Lead, Bal Utsav — Aug 2021 - Oct 2021