SARVESH SIRAS

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

PROFESSIONAL EXPERIENCE

Mastercard   Pune, India
Software Development Engineer II   July 2021 - July 2024
- Engineered high-throughput REST and async APIs for a **global tokenization platform (1.5K TPS)**, improving transaction notification rates across **Apple Pay, Samsung Pay, and Google Pay by 50%**
- Led a team of 6 in migrating to microservices architecture, enhancing system scalability and performance
- Leveraged tools like **Splunk** and **Dynatrace** to analyze the performance of critical features, identifying and resolving bottlenecks to enhance system response times by **300%**
- Collaborated with product managers, TPMs, and cross-functional engineering teams to define technical requirements and deliver features **30% faster** through Agile sprint planning
- Directed **code reviews and refactoring** using modern design principles, improving maintainability and reducing development time by **60%**

Mastercard   Pune, India
Software Engineer Intern   May 2020 - June 2020
- Developed an internal e-commerce REST app with Spring Boot, Java, React, and H2, contributing across MVC layers for in-house enterprise applications
- Created a plug-and-play mocking framework using Spring interceptors and proxying, enabling API simulation
- Delivered intelligent, stateful mocking that reduced prototyping time by **50%** and accelerated enterprise prototyping velocity for multiple engineering teams

EDUCATION

Carnegie Mellon University   Pittsburgh, PA
Master of Information Systems Management (GPA: 4.0) (Highest Distinction)   Aug 2024 - Aug 2025
Coursework: Distributed Systems, Machine Learning in Production, Object Oriented Programming in Java, Generative AI

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, Operating Systems, Database Management Systems, Software Engineering

SKILLS & CERTIFICATIONS

Programming Languages: C, C++, Java, Python, Go, SQL, HTML, CSS, JavaScript
Technological Skills: Spring Boot, Git, Kafka, Splunk, Dynatrace, Linux, CI/CD, LLMs, SDLC, Spark, AWS, NoSQL, Agentic AI
Publications: A Deep Learning Approach for Digitization of Invoices, IEEE
Hobbies and Interests: Playing Chess, Hiking, Reading Tech Blogs

PROJECTS

RegHealth Navigator (Capstone in collaboration with Simply Compliance LLC)   May 2025 - Aug 2025
- Built an **AI-powered compliance assistant** that automates Medicare rule analysis using **Retrieval-Augmented Generation (RAG)**, GPT-4o, and **FAISS-based semantic search**, reducing policy review time and cost by **53%**
- Architected **Flask** backend APIs for Q&A, summarization, and comparison modules with **95%** answer accuracy
- Optimized pipelines with async processing and caching, reducing API costs by **80%,** enabling **real time responses**
- Deployed and tested the platform on AWS cloud, achieving **9.4/10 user satisfaction** across evaluations

High Performance Movie Recommendation System (17-645 CMU)   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