

SARVESH SIRAS

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EDUCATION

Carnegie Mellon University Pittsburgh, PA
Master of Information Systems Management (GPA: 3.90) (Dean's List) Expected Graduation: 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, Relational Database Management Systems, Software Engineering

PROFESSIONAL EXPERIENCE

Carnegie Mellon University, Heinz College Pittsburgh, PA
Graduate Teaching Assistant January 2025 – March 2025

- Facilitated engaging classroom discussions and organized review sessions to reinforce course concepts
- Managed grading tasks and maintained the course website to ensure seamless access to learning resources

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 powered platforms like **Apple Pay, Samsung Pay, Amazon Pay**, etc.
- 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**
- Collaborated with product managers, and engineering team members to define project requirements, plan Agile sprints, and deliver innovative software solutions through effective teamwork and clear communication
- Thrived in a fast-paced problem-solving environment, effectively managing multiple projects and priorities, actively participating in code reviews and provided constructive feedback to enhance code quality

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, PHP

Technological Skills: PyTorch, DBMS, Spring Boot, Git, Kafka, Splunk, Dynatrace, Linux, Unix, CI/CD, LLMs, Postgres, SDLC, Oracle SQL,

Certifications: IBM Machine Learning Professional Certificate, Specialization in Python by University of Michigan

ACADEMIC PROJECTS

Production-Ready Movie Recommendation System Jan 2025 – Present

- Designed a movie recommendation system using collaborative filtering, serving 1M+ users with Python/Flask, achieving 99% service availability, handling >2K daily requests with <800ms latency
- Designed a modular ML pipeline with Kafka-based data 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 nginx
- Analyzed fairness, security, and feedback loops using telemetry data; detected bias and proposed mitigation for data poisoning attacks

LEADERSHIP & ACTIVITIES

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