

# 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, Engineering Mathematics

## 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 highly scalable, secure, fault-tolerant 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++, Python, Java, SQL, HTML, CSS, JavaScript, PHP, iOS, Swift

**Technological Skills:** PyTorch, RDBMS, Spring Boot, Git, Kafka, Splunk, Dynatrace, Linux, CI/CD, LLMs

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

## ACADEMIC PROJECTS

**Production-Ready Movie Recommendation System** (Python, Flask, Docker, Pandas, Jenkins) Jan 2025 – Present

- Designing a movie recommendation system serving 1M+ users with Python/Flask, achieving 99% service availability through Docker, implementing continuous model retraining pipelines using Jenkins and scheduling
- Engineering a robust ML pipeline utilizing collaborative filtering algorithms, pandas for data processing, pytest for automated testing, and implemented A/B testing infrastructure

**Digitization of Invoices** (Machine Learning, Python, PyTorch, Tesseract, NumPy, SciPy, Flask) Jan 2021 – May 2021

- Employed Computer Vision techniques to digitize paper-based invoices into excel sheets with **86%** accuracy
- Trained Convolutional Neural Network models to accurately map the invoice data and devised image processing techniques to detect table and process text, respectively
- Published the project's findings in a research paper titled **A Deep Learning Approach for Digitization of Invoices** in the IEEE journal

## LEADERSHIP & ACTIVITIES

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