SARVESH SIRAS

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EDUCATION

Carnegie Mellon University — Pittsburgh, PA
Master of Information Systems Management — Expected Graduation: Aug 2025
Coursework: Introduction to Deep Learning, Object Oriented Programming in Java, Design Thinking, Statistics

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, Principles of Programming Language, Natural Language Processing, Computer Networks, Operating Systems

PROFESSIONAL EXPERIENCE

Mastercard — Pune, India
Software Engineer II — July 2021 - July 2024
- Engineered highly scalable, secure, fault-tolerant micro-services capable of handling **1500** transactions per second
- Spearheaded the migration of Monolithic applications to Micro-services architecture which had better performance and scalability
- Leveraged tools like Splunk and Dynatrace to analyze the performance of critical features, identifying and resolving bottlenecks to enhance overall system efficiency **3x**
- Collaborated with stakeholders, and engineering team members to define project requirements, plan Agile sprints, and deliver high-quality software on time 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
Technologies and Tools: Data Structures, PyTorch, RDBMS, Spring Boot, Git, Kafka, Splunk, Dynatrace, Linux
Certifications: IBM Machine Learning Professional Certificate, Specialization in Python by University of Michigan, Deep Learning and Neural Networks

ACADEMIC PROJECTS

MyTorch (Deep Learning, Python, NumPy, SciPy) — Aug 2024 - Present
- Developed a PyTorch-like framework from scratch to train neural networks, including convolutional neural networks (CNNs), simple multilayer perceptrons, and recurrent neural networks (RNNs)
- Integrated these components to compose a complete MLP, CNN layers of any depth
- Formulated loss functions to train network parameters effectively

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
- Applied Machine learning models to accurately map the invoice data into an excel sheet
- 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 — Aug 2024 – Present
CMU Chess Club — Aug 2024 – Present
Pro Bono Consultant Lead, Bal Utsav — Aug 2021 - Oct 2021