

SARVESH SIRAS

ssiras@andrew.cmu.edu • (412) 918-9840 • linkedin.com/in/sarveshsiras/ • www.sarveshsiras.github.io/

EDUCATION

Carnegie Mellon University Pittsburgh, PA
Master of Information Systems Management (GPA: 3.90) 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, Stream API
Certifications: IBM Machine Learning Professional Certificate, Specialization in Python by University of Michigan

ACADEMIC PROJECTS

MyTorch (Deep Learning, Python, NumPy, SciPy) Aug 2024 – Dec 2024

- Designed and developed foundational layers for deep learning models, including linear layers, activation functions (ReLU, Sigmoid, Tanh, Softmax), and regularization techniques like batch normalization from scratch
- Constructed MLPs of varying depths, implemented forward and backward propagation, and optimized models using gradient descent and advanced optimizers like SGD with momentum
- Engineered convolutional layers (1D and 2D), pooling layers (MaxPool, MeanPool), and resampling operations

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