

Rosie Shen

EDUCATION

Master of Science in Information Management Data Science Specialization	Expected 2025
<i>University of Washington</i>	GPA: 4.0/4.0
Bachelor of Science in Computer Science and Software Engineering	December 2023
<i>University of Washington</i>	GPA: 3.82/4.0

WORK EXPERIENCE

Research Assistant Information Processing Lab at the University of Washington	September 2023 – January 2024
- Performed optimizations to multi-GPU training, which enhanced computing efficiency for deep learning model - Analyzed classification for 450,000+ images, contributing to a research paper on computer vision - Collaborated on refining the technical accuracy of a research publication	
Software Engineer Intern Perfect Corp. (NYSE: PERF)	July 2023 – September 2023
- Improved Intersection over Union(IoU) accuracy by 34% by optimizing a self-supervised machine learning BEiT - Tuned hyperparameters and monitored GPU performance using TensorBoard to improve model throughput - Evaluated and benchmarked 4 facial recognition tools; optimal model improved accuracy by 10% - Developed a model training pipeline using computer vision tools, which led to improved model reliability	
Research Assistant Climate Risk Lab at the University of Washington	February 2023 – June 2023
- Directed a cross-functional team of 6 in the rapid development of a React web application - Leveraged Jira and GitHub to manage workflows, which resulted in on-time delivery for strict 2-month deadline - Collaborated with stakeholders to identify use pain points and set product requirements	
Software Engineer Intern ThinkerSol LLC	June 2022 – August 2022
- Collaborated with a cross-functional agile scrum team to implement a Model View Controller design pattern - Coordinated cross-team efforts to implement RESTful server API in React JavaScript using PostgreSQL database - Refactored in-house React code to produce an easily integrable library, which saved 60+ hours of coding effort	
Software Developer Intern SGDRIL Lab at Washington State University	June 2021 – September 2021
- Developed interface solutions using Python and Flask to implement network data visualization - Designed a multi-layer dynamic interface that overlapped weather threats with a power grid network - Documented and communicated insights to the team, facilitating informed technical decisions	

SOFTWARE ENGINEERING PROJECTS

Web Application Security Implementation

- Secured PHP web app with HTTPS and SSL protocols, aligning with software architecture best practices
- Used Docker to containerize and isolate environments for penetration testing
- Conducted network traffic analysis using Wireshark to optimize system reliability and harden app security
- Developed automated tests using Selenium and Pytest to ensure application security and functionality

SQL Database Design and Implementation

- Designed and implemented SQL relational database to provide low-latency access for a streaming application
- Conducted thorough research to define database scope, Entity-Relationship Diagram, and data model
- Developed and documented SQL statements for database structure

Predictive Analytics in Food Safety and Public Health

- Designed scalable data pipelines to collect and process 14,000+ restaurant reviews from 35 cities using Google Places API, Python and Pandas, enabling large-scale analysis of customer feedback
- Applied machine learning models (Scikit-learn LDA) to extract structured insights
- Performed data analysis and visualization using Matplotlib, Numpy and Pandas in Jupyter Notebook

SOFTWARE ENGINEERING SKILLS

Programming Languages: Python, C++, C, Java, SQL (SQLite), JavaScript, TypeScript, ARM Assembly, HTML/CSS
Libraries/Frameworks: React, Next.js, TailwindCSS, PyTorch, TensorFlow, OpenCV, Pandas, Numpy, Matplotlib
Software Development Tools: Docker, Linux, Git, GitHub, Jira, VSCode, Figma, Jupyter Notebook, Selenium, Pytest