Pramesh Sharma

530-216-8333 | prameshsharma25@gmail.com | linkedin.com/in/prameshsharma | github.com/prameshsharma

Education

University of California, Davis — Davis, CA

Bachelor of Science in Computer Science — *Sep. 2021 – Jun. 2024*

- Awards: Regents Scholar | AvenueE Scholar | Engineering, Mathematics, and Physics Scholar | Michael Sager Memorial Scholar | Genentech gLINX Program Mentee | Deloitte Leadership, Allyship & Mentorship Scholar

Experience

Intelligent Retail Lab by Walmart — Jul. 2024 – Present

Software Engineer — *Bentonville, AR*

- Reduced inference latency and object detection by 40% across edge cameras by building and deploying a scalable DeepStream pipeline in Python to run multiple YOLO models
- Improved deployment and onboarding for 5+ engineers by upgrading the edge inference stack to DeepStream 7.1; containerized the pipeline and packaged it as a reusable Python module with Docker
- Optimized collection of manual metrics across 10+ NVIDIA Jetson devices by replacing `jetson-stats` through development of a real-time system monitoring tool using Python, Prometheus, and Grafana
- Cut deployment time by 50% by developing a model converter that transforms PyTorch ONNX models into DeepStream-compatible TensorRT engines; automated training workflows using Kubeflow and Weights & Biases

NASA — Aug. 2023 – Dec. 2023

Computational Biology Intern — *Mountain View, CA*

- Enhanced model accuracy by 40% by designing an AlamarBlue viability model using Michaelis-Menten kinetics, leveraging AutoML and SMAC3; optimized hyperparameters using SMAC3's grid and Bayesian search strategies
- Redefined cell health model using Python by integrating a Linear Quadratic framework to simulate and enhance cell behavior predictions, establishing probability distributions for apoptosis, DNA damage, and mitotic catastrophe

Intelligent Retail Lab by Walmart — June. 2023 – Sep. 2023

Software Engineering Intern — *Bentonville, AR*

- Improved image transformation processing speed by 2.5x for 40,000+ images by building a scalable data augmentation pipeline in Python using Apache Beam
- Enabled faster ML model training across 3+ teams by containerizing and deploying the pipeline to Google Vertex AI using Docker and Dataflow

NASA — Aug. 2023 – Dec. 2023

Space Systems Engineering Intern — *Merritt Island, FL*

- Streamlined cross-functional collaboration across 3+ engineering divisions by standardizing project modeling for the $14.8B Lunar Pilot Excavator through a Systems Engineering Modeling Management Plan in MagicDraw
- Replaced paper-based engineering workflows by defining a cross-functional modeling strategy that aligned procurement, safety, and engineering review processes between design and chief engineers

Genentech — Jun. 2022 – Sep. 2022

Computational Proteomics Intern — *South San Francisco, CA*

- Reduced antibody analysis time by 30% for 10+ scientists by automating protein-peptide data visualization through a RESTful web tool built with Python, Pyramid, and Matplotlib
- Accelerated proteomics workflows to computationally process 3,000+ samples by designing a scalable data pipeline using Python, Docker, R (dataMAPPs)

Genentech — Jan. 2022 – Jun. 2022

Pharma Technical Operations Intern — *South San Francisco, CA*

- Reduced on-call response time by 20% for 40+ drug campaigns by integrating PagerDuty API with JavaScript to streamline incident notifications and drug campaign creation
- Saved 50+ engineering hours per quarter by automating user access to incident data using Google Sheets API and JavaScript, cutting incident handling time by 5 minutes each

Skills

Languages: Python, C/C++, R, JavaScript, MagicDraw, SysML

Frameworks: DeepStream, GStreamer, PyTorch, scikit-learn, Apache Beam, Docker, Google Cloud, Git, Linux