Andrew Jeon

LinkedIn: linkedin.com/in/andrewjjeon/ Email: andrewjjeon@gmail.com Webpage: andrewjjeon.github.io Mobile: +1 (971) 777 1218

Github: github.com/andrewjjeon

EDUCATION

University of Washington, Electrical and Computer Engineering

Seattle, WA

Master of Science in Electrical Engineering (Machine Learning, Computer Vision)

Sep 2023 – June 2025

CSE546: Machine Learning, CSE576: Computer Vision, CSE599G1: Deep Learning, EE596: Advanced Computer Vision, CSE571: AI-Robotics, EE568: Deep Learning for Big Visual Data, EE590: Data Structures & Algorithms, EE599: Independent Research in ML and Computer Vision

University of Illinois at Urbana-Champaign, Electrical and Computer Engineering

Urbana, IL

Bachelor of Science in Electrical Engineering

Aug 2016 - May 2021

SKILLS

Languages: Python, C++

Libraries: Pytorch, Numpy, Matplotlib, OpenCV, Pybullet, Pandas, Scikit-Learn, Hugging Face Transformers

Tools: Git, Docker, Linux, CI/CD (GitLab), ROS2

WORK EXPERIENCE

Machine Learning Intern at Sandia National Laboratories

June 2025- Aug 2025

- Developing Anomaly Detection CNN and custom torch Dataset subclass for current and voltage time-series data.
- Geospatial Analytics Movement Anomaly Detection

Research Assistant at University of Washington

Jan 2024 – May 2025

- 1. Evaluating Sensor Fusion Visual-Inertial SLAM Systems Advisor: Dr. Bingzhao Li
 - Led the testing and evaluation of a sensor fusion inertial navigation system on our lab rover and public driving datasets with Camera, IMU, Lidar, and Wheel Encoders.
 - Tuned sensor parameters for different setups to achieve an Absolute Trajectory Error of 9.12m across 11km trajectories on a public dataset and 1.1m on our rover dataset. Evaluating against other methods, towards ICRA 2026 publication.
- 2. Evaluating Foundation Model Pose Estimation with Synthetic Data Generation, Advisor: Prof. Stan Birchfield
 - Led the development of a pipeline that runs multiple pose estimation foundation model instances. Achieved Rotation Angle Error of 0.674 degrees and Translation Error of 0.655mm on Robot hand pose estimation.
 - Generated synthetic data with virtual camera. Carefully navigated transformation/projection matrices, coordinate frames, and systems to calculate ground truth pose annotations with Pybullet. Extracted CAD models from URDF file.
- 3. Regularization, Hyperparameter Tuning on Low Rank Autoregressive Models, Advisor: Prof. Matt Golub
 - Led regularization and tuning experiments for low-rank and full-rank auto-regressive models resulting in 15-18% improvements (MSE) in model performance.
- 4. Image Processing for Fisheye Camera Image Object Detection, Advisor: Prof. Jenq Neng Hwang
 - Led image processing with OpenCV and trained YOLOv8 Object Detection models on transformed images to achieve a 9% improvement (mAP) in roadside object detection in night-time images.

Data Structures Teaching Assistant at University of Washington

Sep 2024 - Dec 2024

Field Applications Engineer at Texas Instruments

Feb 2023 - June 2023

• Led technical support and design for low power chips and sensors for Microsoft HoloLens and Intel DCAI customers.

Project Experience

Image-Captioning Tactical Advisor Model ICTAM

April 2025 - Present

- Training GIT and BLIP image captioning LLMs on StarCraft Minimap images with tactical analysis captions.
- Built data pipeline to crop minimaps from YouTube videos, and annotate tactical analysis captions.

3D Open Vocabulary Semantic Segmentation for Robot Navigation

March 2024 - June 2024

• Projected vision and text feature embeddings from a Vision Language Model to a voxel grid to perform 3D Semantic Segmentation. This resulted in a best class segmentation accuracy of 0.907 and the robot being able to navigate in 3D

Ego Car Lane Detection

Feb 2025

Filtered point cloud data by spatial location and lidar reflection intensity. Fit 3rd order polynomials to the filtered points to model the left and right lane lines.

Military Target Classification

Jan 2024 - March 2024

- Led soldier image collection, annotation and augmentation with Roboflow.
- Performed YOLOv8 hyperparameter tuning to achieve a mAP of 0.773 on classification of soldier images into "friend"