

Andrew Jeon

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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.
 - Researching iPhone SLAM apps
- Research Assistant at University of Washington** Jan 2024 – May 2025
- 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.
 - Synthetic Data Generation for Foundation Model Pose Estimation**, 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 by setting up a virtual camera, extracting CAD models from URDF file, and calculating ground truth pose annotations with Pybullet
 - 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.
 - 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 Minimaps 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”