# Andrew Jeon

971-777-1218 829 NE 67th St, Seattle, WA 98115, APT 711 andrewjjeon@gmail.com https://andrewjjeon.github.io/

## Education

**University of Washington**, Seattle, WA, USA *2023 - ongoing*

*Master of Science in Electrical & Computer Engineering – Machine Learning, Computer Vision, Robotics* *GPA: 3.91/4.00*

Courses: CSE546: Machine Learning, CSE576: Computer Vision, CSE571: AI-Robotics, EEP596: Deep Learning for Big Visual Data, EEP596D: Computer Vision Classical & Deep, EEP596A: Deep Learning, EEP590: Data Structures & Algorithms, EEP567: Machine Learning for Cybersecurity, EEP599: Independent Research

**University of Illinois at Urbana-Champaign**, Urbana, IL, USA *2016 - 2021*

*Bachelor of Science in Electrical & Computer Engineering* *Jr./Sr. GPA: 3.57/4.00*

## Research Experience

**Autonomous Rover Research Assistant** w/ Professor Mo Li, UW *12/2024 - ongoing*

- Lidar, Camera Sensor Fusion to autonomous rover navigation and SLAM

**AI-Robotics Researcher** w/ Professor Stan Birchfield, Nvidia, UW *09/2024 – ongoing*

- Using Foundation model for 6D Pose Estimation to perform robotic grasping. Run 2 instances of model on the robot and object. Combine the pose matrices robot-to-camera and object-to-camera to get the robot-to-object matrix to perform grasping.

**NeuroAI Researcher** @ SNAIL Lab, UW *07/2024 – 09/2024*

- Experimented with and tuned low rank auto-regressive models to model neural population data. SVD, L2 Regularization, hyperparameter tuning, Reduced Rank Regression Closed-Form. Evaluated models with MSE, AUROC metrics. Code refactor from notebooks to scripts

**Computer Vision Researcher** @ Information Processing Lab, UW *01/2024 – 06/2024*

- Used Image Processing and retrained YOLOv8 Object Detection models on transformed data to better detect roadside classes in Fisheye Camera images. OpenCV Image Processing to transform data into all black & white, retrained on transformed images which improved object detection on night-time images by 5-10% (mAP)
- Successfully reproduced Transformed model results from academic research papers

## Project Experience

**3DVLMaps for Robot Navigation** *04/2024 – 06/2024*

- Projected vision and text feature embeddings from a Vision Language Foundation Model to a voxel grid to perform 3D Semantic Segmentation. This allows robots to navigate in a 3D-space as opposed to only 2D.

**MagiaTimeline: Automatic Subtitle Detection Tool** *04/2024 - 06/2024*

- Used TesseractOCR, thresholding, clustering, to generate timeline annotations for game subtitle translation

**Friend or Foe: Multi-Modal Military Target Identification** *01/2024 – 03/2024*

- Used RoboFlow to annotate segmentations on soldier images. YOLOv8 tuning to classify images of soldiers into “friend” or “foe.”

## Work Experience

**Teaching Assistant**, University of Washington, *Seattle, WA* *09/2024 – ongoing*

- Teaching Assistant for EEP590: Data Structures and Algorithms

**Texas Instruments**, Field Applications Engineer*, Bellevue, WA* *02/2023 – 06/2023*

- Technical support and design for power chips and sensors for clients Microsoft HoloLens & Intel DCAI
- Lead customer visits to understand their product needs

**Tektronix**, Product Marketing Engineer, *Beaverton, OR* *04/2022 – 02/2023*

- Used data analytics CRM to forecast product financial performance.
- Provided technical support and generated marketing content for the 1 and 2 class oscilloscopes.

**Burns&McDonnell**, Electrical Engineer, *Vancouver, WA* *06/2021 – 04/2022*

- Designed control and data systems (SCADA), and MPLS networks for utility clients BPA and PGE

## Publications

- Jeong, K. & Jeon, A. Case Study of User Experience Requirement Creation at Early Phases of System Development Life Cycle for Quick Turnaround. Human-Automation Interaction: Manufacturing, Services and User Experience (In Springer ACES Series) Editors: VG Duffy, Mark R. Lehto, Yuehwern Yih, Robert W. Procto

## Skills

**Languages/Tools:** Python, Pytorch, C, Scikit-Learn, Numpy, Git, MatPlotLib, OpenCV, YOLO, Transformers, Conda, Docker, Linux/WSL, MeshLab, RoboFlow

**Areas:** Machine Learning, Computer Vision, Robotics