# Junwon Choi

## **EDUCATION**

### University of California, Davis

Davis, CA

Master of Science, Statistics (Data Science Track)

December 2025

## University of California, Los Angeles (UCLA)

Los Angeles, CA

Bachelor of Science, Data Theory

June 2024

• **GPA:** 3.7 / 4.0

• Relevant Coursework: Machine Learning, Generative Data Science, Mathematical Modeling, Spatial Statistics

### **EXPERIENCE**

## Sensing and Robotics for Infrastructure (SRI) Lab at UCLA

Los Angeles, CA

Research Intern

March 2023 - Present

- Led multiple projects to add key features on a robust road assessment web application funded by the City of Los Angeles
- Integrated parallel processing scripts to AWS S3, EC2 pipeline, automatically restructuring 10+ GB of geospatial data
- Evaluated road usage patterns and traffic congestion in a network of 88+ million node pairings using network analysis
- Customized computer vision models to classify parked cars from 150+ GB of onboard camera footage

The Daily Bruin

Los Angeles, CA

Data Team Director

May 2023 - June 2024

- Directed a team of 20 journalists to publish 50+ articles and independent data visualizations in the newspaper
  - Launched two additional production teams and trained 15+ new reporters, expanding production capacity threefold
  - Reported GA4 engagement data for all 17 internal teams and advised content strategies to increase readership

Data Journalist

October 2022 - May 2023

- Pitched and produced data-driven, interactive, and responsive web articles using React, JavaScript, and HTML/CSS
- Interviewed and liaised with external organizations and individuals for dataset requests and story details

DataRes at UCLA Los Angeles, CA

Research Team Lead

October 2022 - March 2024

- Headed a team of 5+ students to develop machine learning projects based on novel geometric deep learning research
- Designed custom SQL server to host and filter 50+ GB of raw data, increasing data distribution efficiency by 93%

# Republic of Korea Marine Corps

Gimpo, South Korea

Sergeant (Communications Squad Leader)

October 2020 - April 2022

- Supervised and trained a 20-person team to set up radio and wired communicaion networks for battalion operations
- Interpreted and translated Korean-English for ROK and U.S. officers during 3 major joint training operations

## PROJECTS/RESEARCH

## Synthetic Survey Data Generation and Evaluation: A Case Study on National Voter Files

- Built end-to-end pipeline to generate synthetic data using U.S. voter files with parametric, GAN, LLM based models
- Evaluated synthetic data quality using 4 general utility, 1 target-specific utility, and 5 privacy metrics

#### Fingerhut (Online Retailer) Strategic Consulting [Capstone Project - Data Theory, B.S.]

- Analyzed 1.6+ million customers' web sessions to extract key features driving account activation and purchases
- Developed custom stochastic, classification, and neural network models to visualize and predict customer behavior
- Presented findings to Fingerhut executives and recommended strategic changes to increase customer retention

# Research Paper Classification Optimization Using Networks and NLP

- Implemented k-means and SVD to simplify categorization of 2.4+ million arXiv research papers
- Optimized KNN, random forest, and fastText to develop a high accuracy paper classification model
- Integrated ANNOY (Approximate Nearest Neighbors) model to retrieve similar papers within 800ms

## **SKILLS**

Programming: Python, R, SQL, JavaScript, HTML/CSS, IATEX

Data Visualization: Tableau, Chart.js, D3.js, matplotlib, seaborn, ggplot2, Plotly, QGIS Machine Learning/Networks: PyTorch, TensorFlow, scikit-learn, tidymodels, NetworkX, igraph

Development/Analytics: Git, AWS (S3, EC2, RDS, Lambda), Databricks, Google Analytics, Excel

Languages: English and Korean (bilingual fluency)