Junwon Choi

EDUCATION

University of California, Davis

Davis, CA

Master of Science, Statistics (Data Science Track)

December 2025

• Relevant Coursework: Big Data and High Performance Statistical Computing, Statistical Methods for Research

University of California, Los Angeles (UCLA)

Los Angeles, CA

Bachelor of Science, Data Theory

June 2024

- Relevant Coursework: Data Analysis and Regression, Machine Learning, Data Ethics, Statistical Models in Finance
- Activities: DataRes (Machine Learning Team Lead)
- Military Service: Republic of Korea Marine Corps, 2020 2022 (Leave of Absence)

EXPERIENCE

Data Science Intern

January 2025 – Present

 $Stockholm\ Environment\ Institute$

Davis, CA

- Implement spatio-temporal models for automated environmental monitoring and classification with remote sensing data
- Create interactive geospatial web dashboards, optimizing data processing and visualization for government stakeholders
- Generate data visualizations and insights for publications and policy briefs, assisting data-informed decision-making

Data Science Intern

March 2023 – September 2024

Sensing and Robotics for Infrastructure (SRI) Lab at UCLA

Los Angeles, CA

- Led projects to enhance data processing and analytics for a City of Los Angeles-funded road assessment web application
- Integrated web-scraping and processing Python scripts to AWS ETL pipeline, automating restructuring of backend data
- Applied graph algorithms and predictive models to uncover road demand trends and inform equitable road maintenance
- Refined computer vision models to detect parked vehicles and roadblocks from onboard cameras

Data Team Director & Data Journalist

October 2022 - June 2024

Los Angeles, CA

Daily Bruin

- Directed a team of 20 journalists to publish 50+ articles and data visualization inserts across multiple newsroom sections
- Produced award-winning interactive visual stories, leveraging React, JavaScript, D3.js, Leaflet to communicate insights
- Analyzed GA4 web traffic data for 17 teams, identifying trends that boosted online newspaper audience engagement
- Expanded production capacity threefold by launching two internal production teams and training 15+ new reporters

RESEARCH / PROJECTS

Performance of TDA Filtrations in High Dimensional Simplicial Neural Networks | Research Paper

- Designed a multi-input CNN to classify high-dimensional simplicial complexes using topological filtrations
- Examined CNN activations to assess topological structures' impact on feature learning and accuracy

Synthetic Survey Data Generation and Evaluation | Research Paper (Accepted to ACM KDD 2025: ADS Track)

- Constructed a data generation pipeline using parametric, GAN, and LLM-based models to benchmark statistical fidelity
- Proposed a framework to assess synthetic data quality, balancing utility and privacy

Fingerhut (Online Retailer) Strategic Consulting | Capstone Project (Data Theory, B.S.)

- Analyzed 1.6+ million customer web sessions to extract key features driving account activation and purchases
- Developed a stochastic model to predict and visualize customer behavior based on advertisement exposure
- Presented insights and recommended strategic changes to Fingerhut executives to increase customer retention

Research Paper Classification Optimization with NLP and Instance-Based Learning | Course Project

- Built an NLP pipeline to retrieve metadata and text from the arXiv API, preprocessing and categorizing research papers
- Benchmarked clustering models against fastText and ANNOY to optimize classification

SKILLS

Programming: Python, R, SQL (MySQL, SQLite), JavaScript, HTML/CSS

Data & Cloud Technologies: Git, AWS (S3, EC2, RDS, Lambda), Databricks, Google Analytics

Machine Learning: PyTorch, TensorFlow, scikit-learn, OpenCV, NetworkX, igraph

Visualization & Reporting: Excel, Tableau, QGIS, Google Earth Engine, Leaflet, D3.js, Chart.js

Languages: English and Korean (bilingual fluency)