

Andrea Kang

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Education

University of California, Los Angeles (UCLA)

September 2023 – TBD

Doctorate of Philosophy in Statistics and Data Science

- Awarded the Graduate Dean Scholar's Award (2023)
- Qualifying Exam under Profs. Lu/Wu: Distillation of Relational Knowledge in Large Language Models
- CogSci Paper: Synthetic Data Generation with Large Language Models for Improved Depression Prediction

University of California, San Diego (UCSD)

September 2021 – June 2023

Masters of Science in Electrical and Computer Engineering (Machine Learning and Data Science)

- Courses: ECE 253 (Image Processing), ECE 208 (Computational Biology), ECE 285 (Visual Learning)
- TA for MGTA 456 (Supply Chain Analysis)
- Thesis under Prof. Cosman: Classification of Body Language from Point Clouds using Neural Networks

Carnegie Mellon University

August 2014 - May 2018

Bachelor of Science in Cognitive Science (Artificial Intelligence concentration), Minor in Drama

- Courses: 15-112 (Python), 15-122 (C0), 15-381 (Artificial Intelligence)
- Received Honors on the Fall 2016, Fall 2017 and Spring 2018 Dean's List
- Admitted to the Psi Chi International Honors Society for proficiency in Psychology (2018 – present)

Experience

Research Assistant, UC Los Angeles

Sept 2023 – Present

- Analyzing the interpretability of large language models in semantic knowledge/latent beliefs under Professors Hongjing Lu, Ying Nian Wu

Computer Vision Intern, Samsung

May 2023 – August 2023

- Expanded neural network to generate diverse synthetic data for hand pose estimation

Student Nanoengineering Lab Assistant, UC San Diego

June 2022 – Sept 2023

- Facilitated pipeline for segmentation of the heart's left ventricle wall under Professor Sheng Xu
- Utilized machine learning for biomedical imaging; employed neural network with 50+ ultrasound scans
- **Paper: A fully integrated wearable ultrasound system to monitor deep tissues in moving subjects**

Game Development Intern, UC San Diego

June 2022 – August 2022

- Developed, debugged core UI features for educational video game in 8 weeks using Unity, C#, Github
- Collaborated in a team-based environment, inspired work on thesis with neurodiversity in mind

Senior Data Analyst, Samsung

July 2018 – August 2021

- Compiled a dataset of over 100K images and annotations through Python, MATLAB, Mechanical Turk
- **Patent co-author: System and Method for Providing Dominant Scene Classification by Semantic Segmentation;** Improved the network's performance by 5-10% with Tensorflow, Tkinter
- **Patent author: Morphological Operations for Text in Semantic Segmentation;** Utilized recursion to group text annotations by paragraphs in scanned images through OpenCV

Skills

Technical: Python (Pytorch, Tensorflow, Tkinter, SQLite, Spark, Deeplab), MATLAB, Linux, E-Prime, C#, Unity, Java, JavaScript, SQL, GitHub, Standard ML, C, R

Data Analysis: Semantic segmentation, Scene classification, Amazon Mechanical Turk (MTurk), Linear algebra, Probability, Image processing, Convolutional neural networks (CNN), Amazon Web Services (AWS), Large Language Models (LLMs)

Leadership/Management: President of CMU's Archery Club (2017-2018), volunteer for UCSD's Graduate and Professional Student Association (2021-2023), committee member for UCLA's John Wooden Center Board of Governors, member of Korean-American Women in Science & Engineering, member of UCLA's food insecurity group Bruin Dine