Irvine, CA, USA https://dan2972.github.io/ danjs2830@gmail.com Education University of California, Irvine, Irvine, CA September 2021-Present **B.S.** in Computer Science Expected Graduation: December 2024 Specialization: Intelligent Systems Total Cumulative GPA: 4.0/4.0Research **Undergraduate Research – Computer Vision** January 2024-Present Experience University of California, Irvine • Conducted an independent research study under Professor Berg to explore areas such as knowledge distillation in image classifiers and Neural Radiance Fields (NeRF). • Reimplemented papers to replicate authors' results using PyTorch, specifically for response-based and feature-based knowledge distillation, and NeRF. • Developed a user-friendly module for training NeRF models and created a comprehensive guide for other students to recreate NeRFs. • Participated in weekly meetings with the computer vision group, discussing ongoing research and recent papers on transformers, diffusion, and generative models, building a strong foundation in advanced generative techniques and mathematical concepts. Undergraduate Research – Calit2 ML/Industrial IoT January 2024-June 2024 University of California, Irvine • Started a project in the Calit2 lab with postdoc Researcher Yutian Ren to create an interactive VR environment, with the goal of utilizing a self-labeling method for adaptive ML for intent prediction in VR applications. • Created an environment for the Meta Quest 3 using Unity to stream the upper-body pose, hand pose, and visual data in real-time to a Flask server. **Undergraduate Research – Quantify** April 2024-September 2024 University of California, Irvine • Initiated a research project under Professor Wong-Ma to evaluate the impact of integrating news articles as context for a reinforcement learning-based stock trading model. • Developing a PPO-based stock trading agent with a custom network that includes an attention module to incorporate sentence embeddings from recent news, generated using a sentence transformer and an LLM. • Developed Python modules to retrieve and preprocess years of minute-level stock market data and news articles. **Undergraduate Research – TLC** April 2024-October 2024 University of California, Irvine • Collaborated with PhD student Jason Lee Weber, Dr. Wong-Ma, and Dr. Gago-Masague in the Teaching and Learning in Computing lab (TLC) to analyze student behaviors across multiple submissions for autograder-based coding assignments. • Created a Python API wrapper for an online autograding platform, a multi-threaded web scraper to collect submissions for, and performed data-processing for analysis. **Research Assistant (Part-Time)** July 2022-August 2022 KRIHS (Korea Research Institute for Human Settlements)

• Assisted several researchers in the real estate market research center by developing programs to automate tasks for processing and generating statistical data.

| | • Used Python to create a generator for Excel files that combined housing market data provided by the South Korean government to view statistical numbers regarding the impact of events such as the COVID-19 outbreak on the market. | |
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| | • Aided in research for the US market data in order to comp Korean housing market situation. | pare with the current South |
| Posters / Presentations | JL. Weber, H. Park [*] , D. J Song[*] , J. Apillanes, B. Martinez Neda, J. Wong-Ma, and S. Gago-Masague. Investigating Autograder Usage in the Post- Pandemic and LLM Era. poster in the 56th ACM Technical Symposium on Computer Science Education (SIGCSE TS '25). (Accepted) | |
| | Both authors contributed equally to this research | |
| Projects | Custom Voxel Engine May 2023 – Present Used C++, GLM, and OpenGL to create a rasterized voxel engine to simulate a 3D world of chunk-based procedurally generated infinite worlds featuring ambient occlusion and greedy meshing. | |
| | Ray Tracing Engine Used C++, CUDA, GLFW and OpenGL to create a real-tim of displaying various materials (e.g. Lambertian, metals, d) | August 2024 – Present ne ray tracing engine capable ielectrics). |
| | • Implemented the Edge-Avoiding À-Trous Wavelet Transforoutput in real-time. | orm to denoise the rendered |
| Teaching Experience | ICS 46 – Data Structure Implementation and Analysis University of California, Irvine | |
| | Learning Assistant | Winter 2023 |
| | Paid Tutor | Fall 2023 |
| | Paid Tutor (Head Learning Assitant) Paid Tutor (Head Learning Assitant) | Winter 2024 Fall 2024 |
| | ICS 53 – Principles in System Design University of California, Irvine | |
| | Learning Assistant | Winter 2024 |
| | ICS 31 – Introduction to Programming University of California, Irvine | |
| | Learning Assistant | Fall 2023 |
| Awards | Dean's Honor List Awarded to undergraduate students who complete 12 or mowith a GPA of 3.5 or better. | December 2021-Present ore graded units in a quarter |
| | Phi Beta Kappa Book Award Awarded to undergraduate students who attained a 4.0 coursework during their first year at UCI. | November 2022 GPA in 36 units of graded |