Jeong Lee

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Education

University of California, San Diego (UCSD), La Jolla, CA Expected Graduation: June 2025

B.S | Computer Science | Courses: Data Structures, Object-Oriented Programming in Java, Deep Learning, Algorithm, Statistical NLP, Computational Theory, Digital Logic, Software Engineering, Computer Graphics, Intro to Data Science

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Professional Experience

San Diego Supercomputer Center - RDS Developer Intern **June 2024 - Present**

- Led a team of 6 members as a Product Owner, guiding the development and feature design of Zelp - online platform for college students to find and share recommendations for affordable activities in San Diego
- Worked primarily on backend development, including user authorization, Firebase integration, user posts, and account settings for managing user profiles

UCSD Computer Science and Engineering - CSE8A Summer Tutor **Aug. 2024 - Sep. 2024**

- Provided support to students by assisting with Python programming concepts during lectures, discussion sessions, labs, and office hours.
- Reviewed lecture materials, proctored exams, and graded homework, contributing to overall success of the course

UCSD Engineers For Exploration - Fish Sense Research **Sep 2024. - Present**

- Worked in the End User team and contributed to the development of a web application supporting the FishSense research project focused on backend development, optimizing database interactions

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Projects

Caltech Base 11 Aerospace Mentorship **Jan. 2022 - June 2022**

- Collaborated with 4 team members throughout the 2 month project on the drone pathfinding and mapping and worked primarily on MATLAB drone path planning with RRT and RRT* algorithms
- Networked with Caltech professors and got mentored by graduate students within the aerospace engineering field

NASA MINDS - Team HiveMINDS **Jan. 2023 - April 2023**

- Developed and simulated innovative swarm robotics algorithms for the project, optimizing lunar surface exploration by employing decentralized, pheromone-based communication among autonomous rovers
- Contributed in the development and simulation of a pheromone-formation algorithm, resulting in a substantial increase in area coverage and search capabilities under limited conditions
- Won a third place in best technical poster

HardHack 2024 - Team Minty Hacks **April 2024**

- Designed and built an alarm robot using Arduino, 3D printing, and LCD featuring a timer, blinking LED, and a rolling mechanism with noise that activates when the alarm goes off, providing an effective waking solution
- Won a second place in intermediate track in HardHack 2024 hackathon

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Programming Projects

Composing Music with Recurrence **Feb. 2024**

- Developed and refined LSTM-based neural networks for generating ABC-encoded music, employing techniques such as teacher forcing, hyperparameter tuning, and feature evaluation to enhance model performance

BERT's Take on Intent: Experiments in Fine-tuning Pre-trained Transformers **March. 2024**

- Fine-tuned a pre-trained BERT model for intent classification on the amazon_massive_intent dataset, achieving a high test accuracy through advanced fine-tuning techniques and hyperparameter optimization
- Implemented advanced strategies including warm-up steps, Stochastic Weight Averaging (SWA), and contrastive learning techniques like SupContrast and SimCLR to enhance model performance

Application of Neighborhood Attention Transformers in Age Estimation **April. 2024**

- Fine-tuned a Neighborhood Attention Transformer (NAT), a type of Vision Transformer (ViT), for age estimation on facial images, demonstrating improved runtime performance and computational efficiency
- Compared NAT's performance with other transformer-based models, demonstrating that it offers comparable top-1 accuracy to state of the art models while exhibiting better runtime performance

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Technical Skills

Python, Deep Learning, C Programming, C++ Programming, Java Programming, JavaScript, Assembly Language, Numpy, Matplotlib, Pytorch, Data Visualization, Arduino, MATLAB, Firebase, Node.js, React, Figma