Leo Tsunghan Lee

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Education

- **University of Southern California** — Los Angeles, CA
  Master of Science in Computer Science - Data Science — *August 2023 - May 2025*
- **University of California, Santa Cruz** — Santa Cruz, CA
  Bachelor of Science in Computer Science, GPA: 3.82 — *October 2020 - June 2023*
  Honors: Cum laude, Highest Honor in program.

Skills

- **Languages**: C++ (Programming Language), SQL, NoSQL, PostgreSQL, JavaScript, TypeScript, Swift, Kotlin, React Native, C (Programming Language), Python (Programming Language), Bash
- **Tools**: Pandas, Numpy, Oracle Live SQL, Agile Methodology, Docker, Express.js, Node.js, GIT, matplotlib, open3d, openGL
- **Courses**: Foundation of AI, Deep Learning, Database Systems, Probability and Statistics, Analysis of Algorithms, Full Stack Development, Mobile Application, and Computer Networks.

Experience

- **University of Southern California** — Los Angeles, CA
  Machine Learning Research Intern — *September 2023 - Now*
  - Leading research endeavors in the outlier detection lab involves integrating deep learning, unsupervised machine learning, and supervised machine learning as a benchmark to identify anomalies within extensive textual datasets.
  - Currently in the process of developing a comprehensive Python library dedicated to the compilation and integration of the outlier detection algorithms.
- **University of Southern California** — Los Angeles, CA
  Artificial Intelligence Research Intern — *January 2024 - Now*
  - Developed a Python script for merging ROS bag files at a generative AI lab, enabling seamless synchronization of data from multiple cameras and ensuring a unified timestamp for comprehensive analysis of robotic vision datasets.
  - Currently leading the development of a CUDA-based Iterative Closest Point (ICP) script to transform an arbitrary point cloud to a reference point cloud.
- **University of California, Santa Cruz** — Santa Cruz, CA
  Tutor — *March 2021 - June 2023*
  - Conducted up to 10 hours of weekly office hours to provide comprehensive support to students' labs and coursework.
  - Incorporated both online and in-person sessions to break down lab assignments into achievable objectives.
  - Partnered with TAs and Tutors to provide sessions for over hundred students

Projects

- **ROS TimeAlign**
  Project Lead — *January 2024*
  - Orchestrated the development of a Python script utilizing the rosbag library to merge and synchronize data from five separate camera bag files for accurate analysis.
  - Implemented timestamp alignment techniques to harmonize the temporal data across multiple bag files, enhancing the reliability and consistency of the large-scale collected robotic data.
- **Mail Clone**
  Project Lead — *September 2022 - December 2022*
  - Developed a Gmail replica utilizing React states and hooks to dynamically update the mail interface.
  - Integrated Material UI library to ensure a well-tested and user-friendly interface.
  - Deployed comprehensive testing on frontend, backend, and end-to-end using the React Testing Library and Puppeteer.