

EDUCATION

- **University of Southern California** Los Angeles, CA
Ph.D., Computer Science Aug. 2018 – Present
- **University of Southern California** Los Angeles, CA
B.S., Computer Science; B.S., Electrical Engineering; GPA: 3.83 Aug. 2014 – May 2018

RESEARCH

- **USC Networked System Laboratory** Los Angeles, CA
Graduate Research Assistant Aug. 2018 – Present
 - Worked with PointCloud Library and different 3D sensors to automatically fuse point clouds.
 - Developed algorithms that use ICP, features matching and SLAM to localize and track objects in the 3D space.
 - Developed an outdoor mobile AR tracking system that does not depends on the traditional feature-based map.
 - Designed and implemented a mobile VR system that can localize itself in a given 3D map.

INTERNSHIP

- **Google Inc.** Mountain View, CA
Software Engineer Intern May 2022 – May 2023
 - Interned in NetInfra Team under S2Infra.
 - Developed a dashboard that shows the spatial and temporal frequency of network hotspot in Google network.
 - Analyzed the correlation between network utilization and RPC latency.
 - Quantified how applications are impacted by network hotspots. The result showed that network can be at least 10% more utilized without sacrificing application performance.
- **Waymo Inc.** Mountain View, CA
Software Engineer Intern May 2021 – Aug 2021
 - Interned in Waymo Perception Team.
 - Designed and implemented a change detector by comparing cars' LiDAR data with the existed map.
 - Applied raycasting techniques to find objects that exists in the old map but removed in cars' observation.
 - Implemented an efficient pipeline that can process millions of frames within an hour.
 - Succeeded in finding new structures and removed object from the maps in the service area.
- **Google Inc.** Mountain View, CA
Software Engineer Intern May 2019 – April 2020
 - Interned in Google Cloud NetArch Team and worked on cloud projects characterization.
 - Analyzed traffic matrices of Google Cloud Projects.
 - Used clustering techniques (Hierarchical clustering, K-Mean clustering and Spectral clustering) to analyze traffic matrices.
 - Detected project mis-configuration based on the analysis of traffic matrices.
 - Complemented anomaly detection models by the project characterization.
- **Google Inc.** Mountain View, CA
Software Engineer Intern May 2018 – Aug 2018
 - Interned in Google Fi Bridge Team and established dynamic MTU mechanism in Fi Bridge network.
 - Discovered and characterized Linux kernel's behavior under different settings of Path MTU Discovery.
 - Collaborated with Google Marconi team to implement Path MTU Discovery protocol in user space network stack.
 - Reduced Fi Bridge network's overhead and improved MTU by 10%.

TECHNICAL SKILLS

- **Programming Language:** C++, Python, Java, Golang, SQL, MATLAB, OCaml
- **Software Framework:** PCL, Eigen3, Ceres, ROS, Numpy, Pandas, Scipy
- **Tools:** Docker, CMake, Git, Android Studio, Xcode