Jonathan Carlson

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Education

University of California, Los Angeles (UCLA)   *Los Angeles, California*

B.S. IN COMPUTER SCIENCE, GPA 3.6   *Sep. 2019 - June. 2023*

- Coursework: Operating Systems, Algorithms, Networking, Programming Languages, Neural Networks and Deep Learning, Computer Vision, Machine Learning, Multivariable Calculus, Linear Algebra, Discrete Structures
- Dean's Honors List in Winter 2020/21, Spring 2022

Work Experience

Tibit Communications   *Petaluma, California*

FIRMWARE ENGINEERING INTERN   *June 2022 - Sep. 2022*

- Implemented IEEE 802.1X Key derivation function (KDF) to generate keys necessary for MACsec (IEEE 802.1AE) Key Exchange (MKA).
- Improved internal tools to increase engineer productivity as well as adapted internal tools to be customer facing which simplified and extended configuration of Tibit's devices.
- Created a calibration model tester in Python to compare different calibration models which were used to optimize calibration times.

HydroPoint Data Systems   *Petaluma, California*

ENGINEERING INTERN   *Jan. 2021 - Sep. 2021*

- Utilized machine learning to help them optimize their water leak detection capabilities.
- Successfully handled my workload for both this internship and 4 summer courses at UCLA.

Projects

Insta-Chef (CS 35L Project)   *Los Angeles, California*

FULL STACK DEVELOPER   *Feb. 2021 - Mar. 2021*

- Created a recipe-finding website that leverages ingredients you have in your kitchen using React and Firebase Realtime Database.
- Led the design of a user-specific Pantry where the user can search for recipes based on a selected ingredient.
- Styled the Login and Pantry pages to make them accessible for mobile users.

Micromouse (IEEE at UCLA Project)   *Los Angeles, California*

IEEE STUDENT BRANCH AT UCLA   *Oct. 2020 – Mar. 2021*

- Designed a PCB which detects walls using IR sensors and receivers and sends that data to an STM32 microcontroller.
- Designed a maze-solving algorithm that used flood fill to navigate any unknown maze

IDEA Hacks   *Los Angeles, California*

CORPORATE COMMITTEE MEMBER   *June. 2020 - Jan. 2021*

- Connecting and securing sponsorships with tech companies such as Qualcomm, to fundraise for the largest hardware hackathon on the west coast, IDEA Hacks.

Skills

Programming   C, C++, JavaScript, Python, Arduino, R, Bash
Technologies   PyTorch, React, Firebase, Git, TensorFlow, LaTeX

Honors & Awards

Eagle Scout   *Petaluma, California*

BOY SCOUTS OF AMERICA, TROOP 9   *January 2017*