Kyle Weng

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Education

California Institute of Technology—Pasadena, California (2018 –)

- Major: Computer Science (Minor: Philosophy, Data Science), GPA: 4.0, Expected Graduation: June 2022
- Taken classes in: Data Structures, Algorithms, Software Engineering, Decidability and Tractibility, Computing Systems, Learning Systems/Machine Learning, Data Mining, Robotics, Functional Programming, Algorithms, GPU Programming, Data Analysis, Databases, Programming Language Design, Statistical Inference, Digital Signal Processing, Computer Graphics

Work Experience

Twitter—Infrastructure October 2021 – December 2021

Software Engineering Intern (Incoming)

Hulu—Experience Delivery Platform June 2021 – September 2021

Software Development Intern

- Expanded file format support in Hulu's image delivery service, resulting in a ~90% file size reduction.
- Currently developing eager processing to speed up image delivery times.

Off Topic—Zette July 2020 – September 2020

Backend Software Development Intern

- Developed product backend API in Node.js (TypeScript).
- Utilized Google Cloud + Firebase, Stripe, and Mixpanel to implement features.

California Institute of Technology—Geological and Planetary Sciences Dept.

Research Assistant (Software Development) September 2019 – March 2021

- Wrote pipeline for processing satellite data in contrail detection project.
- Wrote and augmented Matlab and C scripts to simulate convection currents as logic gates.

Data Analyst June 2014 – March 2018

- Coded algorithms in Python and Matlab to manipulate and process atmospheric gas data.
- Co-authored research posters presented at the 2016 AGU fall conference.

NASA/Jet Propulsion Laboratory—Mission Control Systems/Science Data Visualization

Mars 2020 Software Development Intern September – November 2019

- Developed surface simulation backend for the Mars 2020 rover.
- Added debugging features to support future software development.

Embedded Systems Development Intern June – August 2019

- Developed features for embedded systems for a high-altitude balloon and a CubeSat.
- Co-authored two papers presented at the 2020 IEEE Aerospace conference.

Selected Extracurricular Activities

Robotics Team (2014 – 2020)
- Developed code curriculum as lead programmer
- Mentored the team from 2018 – 2020

Speech and Debate Team (2015 – 2018)
- Policy debate, national circuit Lincoln-Douglas debate, extemporaneous speaking
  - Top 20 in California in Policy (2018)

Student Investment Fund (2018 –)
- Met weekly to invest and discuss market trends
- Current board member

Caltech Freshman Admissions Committee (2019 –)
- Current undergraduate representative
- Discussed and passed policy changes

Research

Tethered Balloon-Based Experiment of Surface Water Height Using Satellite Signals of Opportunity (2020)
Utilizing High Altitude Balloons as a Low-Cost CubeSat Test Platform (2020)
Patterns of Seasonal to Interannual Variabilities of Carbon Dioxide Mixing Ratios from in-situ Measurements (2017)
Uptake of OCS in Alaska North-America Land Region (2016)

Software

C, C++, Java, Python, OCaml, Haskell, JavaScript (TypeScript), Matlab, R, SQL

Miscellanea

Third Place – 2019 LA Google Tech Challenge

FIRST Robotics Competition
- Semifinalist – 2017 Arizona North Regional
- Finalist – 2016 Ventura Regional

Acknowledged for contributions
- The first detection of an earthquake from a balloon using its acoustic signature (2021)

Ranked 15th worldwide – 3DMark Fire Strike Benchmark (Ryzen 2700x, 2x GTX 1080Ti)