

Kevin Hu

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education

University of California, Berkeley

2018 – 2022

B.S. Electrical Engineering and Computer Science | Public Policy Minor

- GPA: **3.934**
- Regents' and Chancellor's Scholar
- Coursework includes: Data Structures, Algorithms, Machine Structures, Discrete Math and Probability, Linear Algebra, Data Science, **Artificial Intelligence**, Optimization Models, **Machine Learning**, **Computer Graphics**, Databases, Operating Systems, Computer Security, **Computational Photography**, Deep Reinforcement Learning, **Computer Vision**

experience

NVIDIA

Jun 2021 – Aug 2021

TensorRT Intern

- Prepared NVIDIA's **ARM** machine submission for the **MLPerf-I 1.1 deep learning inference** benchmarking competition, optimizing for **maximum performance** and **performance efficiency** (Perf/W), and **matching x86** performance
- Wrote **C++** mini-apps to validate **TensorRT** plugin performance and accuracy on ARM

Apple

Jun 2020 – Aug 2020

Software Engineering Intern

- Developed frontend and backend features for internal tools used to localize thousands of lines of text per week across all Apple software and for all international customers
- Creates backend string storage and API endpoints using **Ruby on Rails** and **PostgreSQL** for the purpose of centralizing and relating discussions regarding thousands of strings, based on the #1 feature request from speaking with localizers

ASUC Office of the CTO

Sep 2018 – Present

iOS Team Lead

- Lead for iOS team for Berkeley Mobile, the official campus mobile application with over **10,000 users**
- Improved responsiveness by moving computation to background threads and adding caching layer for network requests
- Developed **CI pipeline** for automated testing and internal deployment

The Daily Californian

Dec 2019 – Present

Project Tech Lead

- Consultant and technical lead for the Product Marketing team's **native iOS** app for The Daily Californian newspaper
- Leads small team of developers and collaborates with the newspaper's other departments to build MVP
- Oversaw internal beta and gathered tester feedback to **plan development timeline**

Qualcomm

Jun 2019 – Aug 2019

GPU Intern

- Performed competitive analysis of **Metal 2** tile shaders in **Forward+** renderers to aid future GPU design
- Optimized internal **C++ OpenCL** library and kernels for more efficient execution of low-level applications on IoT devices

projects

[github.com/KevWho]

Reconstructing Hand-Object Interactions

Apr 2021 – Present

- Working with graduate students and using **three.js** and **WebGL** to develop a webapp for adjusting reconstructed **3D** hand and object poses from single still images. Additionally using **MongoDB** and **React** for storage and frontend.

U-Net for Relative Depth Estimation

Mar 2021 – May 2021

- Used **COCOA** to create dataset for adjacent-pixel **relative depth classification**, and trained **U-Net** using this dataset
- Reconstructed **segmentation** and **object ordering** with **least squares** from predicted pixel-wise relative depths

Path Tracer and Progressive Photon Mapper

Jan 2020 – Apr 2020

- Implemented simple **Monte Carlo path tracer** in **C++** and wrote simple **GLSL** vertex and fragment shaders
- Modified path tracer and implemented **Progressive Photon Mapping** with a **k-d tree** to substantially decrease noise compared to the Monte Carlo path tracer with **finite memory**, particularly for rendering caustics

tools

C, Objective-C, C++, Swift, Python, Java, Ruby, Rails, PyTorch, scipy / numpy / sklearn, OpenGL, OpenCL, Metal, Vulkan, three.js, Node.js, Flask, React, git, PostgreSQL, MongoDB, Linux

Updated Aug 2021