

Karthik Kalyanaraman

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EDUCATION

University of California, Berkeley

B.S. in Electrical Engineering and Computer Science (EECS)

GPA 3.86 / 4.0

Expected May 2020

Moreau Catholic HS

High School Diploma

GPA 4.71 • Rank: 1st

May 2017

COURSEWORK

EECS151LB: A (FPGA Design)

EECS151LA: A (ASIC Design)

EE149: A+ (Embedded Systems)

EE143: A (Microfabrication)

EE120: A- (Signals and Systems)

EE105: A (Microelectronic Devices)

EE130: A- (Integrated-Circuit Devices)

EE16B: A- (Designing Information Devices and Systems II)

EE16A: A- (Designing Information Devices and Systems I)

CS61C: A+ (Machine Structures/Architecture)

CS61B: A (Data Structures)

CS61A: A (Structure of Comp. Programs)

CS70: A- (Discrete Math and Probability)

SKILLS

Languages

Verilog, C, C++, Python, Java, Swift

Libraries/Application

MQTT, Firebase, Python Flask, Qt, OpenCV, nRF5 SDK

Hardware

NXP/Freescale iMX6UL, Xilinx FPGA's + SOC's, TI MSP, Nordic NRF5 (nrf52840)

EXPERIENCES

Ouster: Systems Electrical Engineering Intern

(Apr 2019 - Present)

- Optical link debugging and test fixture creation
- Full system architecture design
- Altium PCB CAD design

Fiat Lux Labs: Co-Founder and Primary Software/Hardware Engineer

(Jan 2018 - Nov 2018)

- Built a real-time pH, turbidity, and temperature sensor system for large scale industrial fermentations
- Created the hardware base-board using KiCAD, designed the fluidics, built the backend with Firebase and MQTT, and developed the front-end with HTML, CSS, and JavaScript
- Interviewed by Y Combinator for W19

PROJECTS

Personal Automotive Technology Suite

(Oct 2018 - Present)

- Reading CANbus + Kline signals with a Xilinx Artix development board to build a digital instrument cluster with navigation and digital assistant integration using the QT framework
- Using an nrf52840 to add bluetooth phone keyless functionality, and a SIMCOM module for remote key control over the internet

Proxi -- SBHacks Winner

(Jan 2018)

- Built a vehicle proximity alert system for bicyclists at Santa Barbara Hacks 2019
- Won Grand Prize, Best Machine Learning Hack, and Best College Student Hack
- Devpost: <https://devpost.com/software/proxi>

DashOwl

(Nov 2018 - May 2018)

- Continuation of a CalHacks hackathon project under Google's guidance.
 - Target of a Google Education case study
 - edu.google.com/why-google/case-studies/dashowl/
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