Kevin Kellar

Computer Science Undergraduate (Graduating Spring 2021)
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Objective

Seeking embedded software engineering roles targeting performance and safety critical applications

Education

California Polytechnic University
San Luis Obispo, CA

B.S. in Computer Science
Fall 2017 - Present

- Major GPA: **3.9** — Cal Poly Cumulative GPA: **3.9** — Expected graduation **Spring 2021**
- Exceeded in **Algorithms**, **Operating Systems**, **Computer Architecture**, and **Microcontrollers**

Work Experience

Zipline International
South San Francisco, CA

Embedded Software Engineering Intern
March-September 2020

Apple: Special Projects Group
Santa Clara, CA

Software Engineering Intern
Summer 2019

- Thirteen weeks of **systems programming** experience targeting real time **embedded** operating system
- Extensive work with test driven development, using **cmocka for unit test mocking**
- Worked with **bazel** build system to target **both Linux and MacOS**, as well as the primary RTOS

Dynamic Robotics Laboratory (II)
Oregon State University

Research Experience for Undergraduates (REU)
Summer 2018

- Developed **Cassie Trajectory Editor**, a tool to manipulate walking gaits for the bipedal robot Cassie
- Wrote C in Ubuntu Linux to link with C++ libraries such as **MuJoCo Physics Simulator** and **GLFW**
- Self-taught **Matplotlib** in Python for visualizing subtle differences robot trajectories and solver outputs

Dynamic Robotics Laboratory (I)
Oregon State University

High School Research Assistant
Summer 2017

- Completed projects in Arduino, Teensy, Unix, and VR by **independently learning C**
- Assisted in robotics research in the field of path planning, decision making, and teleop controls
- Documented the finished software tools and wrote setup instructions for use within the organization

Programming Skills

C	Fluent. Extensive experience with POSIX-style systems programming as well as MCU-style low-level development
C++	Limited experience with C++ style OOP and smart pointers, as well as frameworks OpenGL and GTest
MCU	Developed analog drivers for the Microchip SAME70 and TI MSP423, as well as work with hardware timers
Comms	Developed MSP423 I2C, UART and SPI drivers, as well as work with CAN and CANOpen protocols for inter board communication
Build	Experience with **Bazel Build**, GNU Make, SCons and CMake for building and testing projects with many targets
Test	Developed systems and embedded level software using C test-driven development, mock objects, cmocka, and GTest
Android	Published **two Android applications** to the **Google Play Store**, using Android Studio, **Java**, and XML
Python	Wrote a **Self Learning** Tic-Tic-Toe program in Python, which learns as the user plays against it
Unix	Comfortable scripting with programs such as sed, grep, as well as **testing** systems-level software
SSH	Built a **home file server**: experience with ssh server setup, ssh tunneling, and RSA key setup

Honors & Awards

Competitions

2019 **2nd Prize**: Roborodentia: Cal Poly's Autonomous Robotics Competition *Cal Poly, SLO*
2018 **1st Prize**: Roborodentia: Cal Poly's Autonomous Robotics Competition *Cal Poly, SLO*
2018 **2nd Prize**: Winter SLOHacks: Developed a networked Android application *Cal Poly, SLO*