Kevin Kellar

Computer Science Undergraduate (Graduating Spring 2021)
4438 NW Boxwood Drive, Corvallis OR, 97330
kkevlar | 541-224-6877 | kellar@calpoly.edu | kellar-kevin

Objective

Future software engineering positions in Systems Programming and Embedded Systems

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**
- Exceeded in **Algorithms**, **Operating Systems**, and **Computer Architecture** (ARM Assembly)
- Finished **Systems Programming** (C programming in Unix environment) in Spring 2018
- Completion of Calculus Series (I - IV), Physics Series (I - III), and Technical Writing for Engineers

Work Experience

Apple: Special Projects Group
Santa Clara, CA

Software Engineering Intern
Summer 2019

- Thirteen weeks of **systems programming** experince 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**
- Developed an **Inverse Kinematics engine** to solve leg joint positions for a user-defined foot target position
- 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

POSIX Devloped over a dozen POSIX system programming projects usine **memory management** and **raw pointers**
Arduino Written Arduino/Teensy sketches including a simulated xbox controller and **autonomous robot drive code**
Git Developed **dozens of GitHub projects**, resolved complex merge conflicts, and used issues / pull requests
Build Systems Experience with the **Bazel build system** and writing complex **Makefiles** for multiple target architectures
Testing Developed systems level software using test-driven development and the **cmocka testing library**
Android Published **two Android applications** to the **Google Play Store**, and learned to use XML for interface design
Networking Developed two networked Java applications: a simple chat room and a **multi-user Android app**
Python Wrote a **Self Learning** Tic-Tic-Toe program in Python, which learns as the user plays against it
Data Structs Comfortable writing and using **hashtables and priority queues** in Java, C, and Python
Unix Shell Comfortable scripting with Unix programs such as sed, grep, and conditionals for simple tasks
SSH Built a **home file server**: experience with ssh server setup, ssh tunneling, and RSA key setup
Security Involvement with Cal Poly WhiteHat, competing in frequent Capture-The-Flag cybersecurity challenges

Honors & Awards

Extracurricular

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*