Nigel Lipps

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EDUCATION - GPA: 3.3

University of California, San Diego   La Jolla, CA
Mathematics - Computer Science   2019 – May 2021

El Camino College   Torrance, CA
Associate's in Mathematics   2016 – 2019

TECHNICAL SKILLS

Languages: C++, C, Java, Python, SageMath, R, Bash, LaTeX, ARM
Operating Systems: Linux, Mac OS, Windows
Developer Tools: Version Control (Git), Visual Studios, IntelliJ, Eclipse, XCode, Jupyter, Anaconda, RStudio, JUnit Tests, Valgrind, CMake, CTest, GoogleTest, SciPy Stack, Pandas
Relevant Coursework: Introduction to Autonomous Vehicles - robotics system integration, computer vision, algorithms for navigation, neural networks, motion sensors, sensor fusion, wiring, hardware-in-the-loop, and power distribution and management

PROJECTS

Six Degrees of Kevin Bacon | *C++, CMake, GoogleTest, Git Version Control*   2020
- Developed a program, which reads in a file with different actors and the movies they where featured in, and returns the shortest path between two actors following the Six Degrees of Kevin Bacon Theory
- Made extensive use of hash tables, trees, and git version control for remote collaboration with a partner, and GoogleTest for code coverage

File Encoder/Decoder | *C++, CMake, CTest, GoogleTest*   2020
- Developed a Huffman encoder which compresses and decompresses a text, mp3, or mp4 file with no loss or distortion of data.

EXPERIENCE

Associated Students Organization (Student Government) / Inter-Club Council   2018 – 2019
El Camino College
- Reviewed Student Services Building's blueprints and made suggestions ultimately implemented in the design
- Promoted campus-wide events to increase student involvement and build school spirit
- Represented El Camino's mathematics students in faculty meetings

Sprocket Programming Club   2018 – 2019
El Camino College
- Assisted in brainstorming the software design for the development of a calendar application in C++

Lead STEM Tutor   2017 – 2018
BriteMinds Learning Center
- Tutored students in middle school through college, including several with special needs, in mathematics, physics, C++ programming, and Microsoft operating systems
- Collaborated with parents and BriteMinds' psychologist on students' progress and learning goals

NASA NCAS Workshop   2017 – 2018
NASA Ames Research Center
- Chief Software/Design Engineer on the team who received 1st place in Mars Rover robotics design competition
- Completed a five-week course on NASA operations and was selected to attend a four-day engineering design competition workshop at Ames Research Center
- Wrote code embedded into the robot for processing of signals from the sensors

First Robotics Competition   2014 – 2015
Palos Verdes Peninsula High School
- Brainstormed and presented a conceptual design that was ultimately selected for implementation by Peninsula High's multiple award-winning robotics team, Team 2637
- Oversaw the construction of the industrial-sized robot making sure all mechanical parts fit the design specifications
- Developed and tested software in an embedded Linux system

UCSD Club Sailing Team   2019 – 2021
University of California, San Diego
- Led our team to it's first victory in four years