Corey Koehler

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Education

University of California, Berkeley August 2019 — August 2023

B.A. Computer Science | B.A. Applied Mathematics

Relevant Coursework:

Robotics, Operating Systems and System Programming, Efficient Algorithms and Intractable Problems, Database Systems, Machine Learning, Computer Security, Data Structures, Linear Algebra, Numerical Analysis, Artificial Intelligence

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Clearance: Interim Secret, TS/SCI pending

Technical Skills

Programming: C++, C, Python, Golang, SQL, Java, JavaScript, Rust, MATLAB, HTML, Scheme
Libraries: Scikit-learn, Matplotlib, PCL, NetworkX, Numpy, OpenCV, Flask, Bootstrap, Node.js
Architectures: x86, Linux, RISC-V, Windows
Tools: AFSIM, Jira, Git, Gitlab, Visual Studio, CMake, ROS

Work Experience

LinQuest — **Sr Software Engineer I** August 2023 — Present

Albuquerque, NM

- Developed an AFSIM plugin in C++ to model advanced satellite receiver functionality and PNT signal processing with a Visual Studio and CMake build system
- Enhanced space situational awareness model by implementing satellite sensor dynamics under solar influence and unit tests
- Researched satellite and satellite receiver functionality in academic journals to rigorously model behavior

NASA Jet Propulsion Laboratories (JPL) — **Software Developer Intern** June 2020 — August 2020

Pasadena, CA

- Developed a comprehensive web-based management tool to oversee laboratory logistics and scheduling utilizing HTML, Flask, Bootstrap, and SQL (SQLite3), covering the full stack of the application
- Performed data analysis on thousands of data points, generating over 100 dynamically updating graphical figures with Matplotlib for actionable insights into lab environments
- Designed a robust user login system with appropriate security measures

Acqubit 3D-SensIR Inc. — **Software Developer Intern** June 2019 — August 2019

Santa Clarita, CA

- Built visualizer and object detection software in C for proprietary LIDAR camera using PCL and ROS
- Began a collaborative project with Trinity Robotics Automation to integrate LIDAR with their robotic arm

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Projects

x86 Operating System — Operating Systems Project June 2022 — August 2022

Berkeley, CA

- Added multithreading, loading and running user programs, and a file system to an x86 operating system in C
- Utilized GDB (GNU Debugger) to identify and resolve memory issues by tracing through x86 assembly

Secure File System — Computer Security Project January 2023 — May 2023

Berkeley, CA

- Developed a secure file storage and transfer system in Go capable of detecting data tampering on servers
- Added features of user creation, encrypted linked file storage with linear append times, and a sharing and revocation scheme using signature-verified invitations