

# Sean Link

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## Education

- B.S. Computer Engineering at Embry-Riddle August 2016 – May 2020
  - GPA: 3.938

## Work Experience

Sr. Software Engineer at Antech (formerly Lightdeck Diagnostics) May 2023 – Present

- Developing and maintaining a Continuous Integration and Continuous Deployment Stack using cmake, nix and amazon web services (AWS)
- Developing and troubleshooting embedded devices

Software Engineer II at NetAlly November 2021 – May 2023

- Creating a bare metal product using a STM32 Cortex-M Microprocessor and the Rust Programming Language
- Brought up new hardware to run Android
  - Created Android App to communicate with Rust APIs via the Java Native Interface (JNI)
  - Modified the Linux Kernel via Menuconfig and C source code
  - Modified Android source code to allow for remote control of devices via VNC
  - Standardized build environments using Docker and the Nix Package Manager

Software Engineer I at Synchroness April 2020 – August 2021

- Automated workflows and deliverables using AWS EC2, Jenkins, GKE and GitHub Workflows
- Developed medical device to send encrypted telemetry using C on an ARM Cortex-M4
- Created teaching materials for the Rust Programming Language
- Developed monitoring software for spacecraft using C++ for an FPGA target

Software Engineering Intern at Synchroness May 2019 – August 2019

Developed medical device that determined the probability of a blood sample being septic (infected)

- Used test-driven development to program peripherals using Python
- Verified and configured proper serial communications between subsystems
- Automated unit test coverage reports across multiple programming languages
- Modified automated unit tests in Travis CI
- Created a custom Kernel using Yocto

iOS Development Intern at Jeppesen a Boeing Company May 2018 – August 2018

- Created feature for peer to peer file sharing using Bluetooth

- Created documentation using Git Source Control and Markdown

Software Readiness Intern at Jeppesen a Boeing Company

May 2017 – August 2017

- Developed software to display geographical data in Google Maps
- Tested and troubleshooted flight optimization algorithms by modifying Lua scripts

Volunteer Tutor at CU Boulder/I have a Dream Foundation

September 2024 – December 2024

- Assisted 4-6th graders complete interactive physics labs

Tutor at Embry-Riddle

September 2017 – May 2020

- Data Structures and Algorithms, Microprocessors, Introduction to Computer Programming, Linear Circuit Analysis, Calculus 1 – 2, Physics 1

### Relevant Qualifications

- Active Open Source Contributor
  - Packaging: <https://github.com/NixOS/nixpkgs/issues/274274>
  - Pull Requests: [PR1](#), [PR2](#), [PR3](#), [PR4](#), [PR5](#), [PR6](#)
  - Review: <https://github.com/stm32-rs/stm32f3xx-hal/pull/189>
  - Author: [Rust at Synchroness](#), [Inverted Pendulum](#)
- Embedded Systems Programming both Bare Metal and Embedded Linux
- Real-Time Programming using Linux RT Extensions
- Control Systems Design using State Space and Simulink
  - Demo: <https://youtu.be/w2OGMYozBlk>
- Team Robotics competition
  - Demo: <https://youtu.be/BFhPgVvaZl0>

### Programming Languages, Tools & Protocols

ARM, AWS EC2, BASH, Bitbucket, Bluetooth, C\C++, CAD, Calculus, Chacha Cypher, Cmake, Controls, Docker, Fish, Git, GitHub Workflows, Google GKE, I2C, IPv4, IPv6, Jenkins, Jira, Linear Algebra, Linux, Logic Analyzer, Mathematica, MATLAB, MQTT, NAT, Nix, Numpy, OpenSSL, OpenCV, Oscilloscope, Python, Rust, RS-232 (a.k.a. UART), Simulink, SPI, SSH, Statespace, TCP/IP, TLS, VHDL, VNC, WPA2 and Yocto