



Karl SOLOMON

Embedded Software Engineer

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| Education

2013–2018 ○ **B.S. Biomedical Engineering**, *The University of Texas*, Austin, TX, 3.65
Track III: Computational Engineering

| Experience

- 2021–2022 ○ **Sr. Systems Software Engineer - GPU**, *Nvidia*, Santa Clara, CA
RISCV/CoreOS
- Implemented drivers for cryptographic compute engine. Deployed to Hopper/Ada chipsets and DriveOS 6+.
 - Implemented root-of-trust library for confidential compute. Deployed to Hopper chipsets.
 - Implemented ISO 26262 compliant FSP drivers in Orin chipsets for DriveOS 6.
- 2020–2021 ○ **Sr. Embedded Software Engineer**, *Stryker*, San Jose, CA
- 2018–2020 ○ **Embedded Software Engineer**, *Stryker*, San Jose, CA
- 1788 Camera Control Unit
- Implemented bootloader and drivers (Cortex M4).
 - Incorporated FreeRTOS into project and added first few tasks.
- SYNK 4K Wireless Video Platform
- Authored SW requirements, specification, and design document to meet IEC 62304 FDA standards.
 - Software team-lead and majority contributor (Cortex M3).
 - Implemented application-layer, driver-layer code, unit tests, POST, CI/CD pipeline, and in-field upgrade.
 - Led 2 rounds of board bringup with suppliers just after PCB print/tapeout.
 - Merged over 150 pull requests and resolved over 100 JIRA bugs with median resolved time < 2d.
 - Recognition: "One Team" Cultural Beliefs Award (Q3 2019), "Best Performance in a Leading Role" (2019), "SYNK 4K Employee of the Month" (Aug 2019, Jan 2020).
- 2017–2018 ○ **Software Engineer**, *Texas Biophotonics Lab*, Austin, TX
- MoleScope
- Developed iOS application (Swift) to collect and push images to OpenCV server.
 - Developed Python+OpenCV server to calibrate, white balance, and calculate probability of malignancy.
- 2017 ○ **Software Engineer Intern**, *Stryker*, San Jose, CA
- 1688 Camera Control Unit
- Designed/implemented camera autofocus algorithm. Implemented POST and flash driver with load-balancing.
- 2016 ○ **Software Engineer Intern**, *Abbott*, Plano, TX
- iOS Test Automation
- Implemented automated regression test and CI/CD pipeline for all HW/SW combinations anytime a new iOS beta/version was released.
 - Wrote team code guidelines doc and refactored automation code base to follow the guidelines. Reduced codebase volume by 85% with significantly improved readability/maintainability.

| Computer skills

Languages C, C++, Python, Bash, Java, C#

SW Tools Git, RTOS, JIRA, Jenkins, OpenCV

Protocols UART, SPI, I²C, USB, HDMI

Targets Arm Cortex-M, RISC-V, iOS, Android

Peripherals Camera, EEPROM, LED, Flash, GPS

Equipment Logic Analyzer, Oscscope, Solder Iron