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 FSP drivers and integrated coverity into CI/CD pipeline for DriveOS.

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 probablity 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

Lanuages	C, C++, Python, Bash, Java, C#	**Targets**	Arm Cortex-M, RISC-V, iOS, Android
SW Tools	Git, RTOS, JIRA, Jenkins, OpenCV	**Peripherals**	Camera, EEPROM, LED, Flash, GPS
Protocols	UART, SPI, I^2C, USB, HDMI	**Equipment**	Logic Analyzer, Oscope, Solder Iron