



Karl SOLOMON

Embedded Software Engineer

San Jose, CA

USA

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karlsolomon

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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 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.

Skill matrix

	Level	Skill	Years	Comment
Language:	●●●●●	Embedded C/C++	6	Core Competency. Rarely use internet as an aid. Enjoys RTFM and using modern C++ features.
	●●●●●	Python/Bash	3	Go-to for scripting. Efficiency depends on internet.
	●●●●●	Swift/Java/C#	1	No recent experience. Requires ramp-up.
Technologies:	●●●●●	I2C/SPI/UART/Cortex-M	5	
	●●●●●	RISCV/RTOS	2	
OS:	●●●●●	Linux	3	Arch and Debian-based Distributions
	●●●●●	Windows	10	Happiest when Outlook is only use case.

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December 9, 2024

Ericka and Etched recruitment team

Etched, Inc.

Cupertino

Firmware Engineer

Hello,

I hope this finds you well. Thank you for considering me for the Firmware Engineer role on your team. Etched seems like an amazing place to work with a very interesting project. I wanted to quickly thank Ericka for her persistence in reaching out to me.

As you'll notice, I've had a work gap over the past $2\frac{1}{2}$ years. This was due to a sudden onset of OCD. After some time at Nvidia, OCD inhibited my work there and eventually led to my termination. At the time I did not know what the issue was. After bouncing around to different mental health professionals with limited progress I was diagnosed with OCD in February 2024. I have been receiving treatment multiple times per week in Phoenix, AZ since the diagnosis. I have come to understand that OCD is hereditary and developed as a complication of starting a new fully-remote job during the pandemic. Since February my treatment has shown significant improvement on my ability to work and live in accordance with my values in spite of having OCD. As a result I have resumed job-seeking and will be moving back to San Jose in January 2025.

How does this impact my efficacy as an employee? This mainly means that I have become more aware of culture fits that work for me and those which don't. Specifically I perform best when I get to collaborate closely with others, when I am not fully remote, and when my manager/coworkers are willing to make time to hear me out should I have questions/concerns. Under these circumstances I am highly motivated and confident in my ability to perform the job well. Should these conditions be impossible to meet then I am probably not the right candidate for your team.

I have continued to write code and take online courses since leaving Nvidia, specifically . The most involved of which is an ultra-light GPS tracker for backpacking. However, as I highly value honesty and do not want to misrepresent myself, I am definitely rusty relative to when I was while working full time. Should you have any questions about this or anything else I am happy to entertain them at any time.

With all that being said, I appreciate your consideration for this role and look forward to your reply.

Best Regards,

John Doe

Karl Solomon

Attached: curriculum vitae