

vaughn@kottler:~\$ cat ./resume.txt

Full-Stack Electronics Engineer, Workflow and Test Infrastructure

Education: **B.S. - Computer Engineering** (UW-Madison, Fall 2018) *GPA: 3.43*
- Majors: Computer Engineering, Computer Science, Dean's List 4/9 Terms

Work: **SpaceX** (Avionics Software Engineer II) *July 2020 - Present*
- Support Falcon production and launch, improve software release cadence
- New hardware-simulation architecture for launch-vehicle, pre-flight testing
Amazon Robotics (Firmware Engineer, SDE I) *Feb. 2019 - July 2020*
- RTOS ([Micrium uCOS-II](#)) system integration & performance profiling
- [IEC 61508](#) & [IEC 61784](#) compliant product development ([SIL-2](#))
- Componentization and build-system evolutions for the source-asset ecosystem
SpaceX (Software Engineering Intern) *Fall 2017, Summer 2018*
- Responsive user interfaces (web stack) for next generation ground systems
- LabVIEW automation & continuous integration distributed as a Python package
Extreme Engineering Solutions (Associate Embedded Engineer) *Spring - Fall 2017*
- Bootloader development for non-Intel architecture systems ([U-Boot](#))

Skills (CE): **Schematic Design & PCB Layout, Processor Driver/Firmware Development:**
- Configuring [GNU make](#), [Bazel](#) and custom build systems, acclimating to large codebases
- Altium & KiCad schematic and PCB layout experience, some Spice simulation exp.
Hardware Communication Protocols: *U[S]ART, I2C, CAN, SPI, USB, Ethernet, PCIe*
- Non-blocking I/O & RTOS, CANopen & custom application layer protocol experience
Hardware-Level Software Debugging: *Logic Analyzers, Oscilloscopes, Multimeters*
- Proficient with debugging tools, aware of when to use (and how to not break them!)

Skills (CS): **Web Development (Full Stack):** *Performant and Reliable | CI + DevOps Automation*
- Java EE, JavaScript/Node.js, PHP, SQL, HTML5 & CSS3, Go, Python
DBMS & System Administration: *Gentoo, Ubuntu, CentOS/RHEL, [De|Rasp]bian*
- Vagrant, Ansible, Docker & Bash script automation, mailing configs
- Apache/NGINX configs (mult. vhosts), DNS with SSL administration
Programming: *Prefer C/C++, Python, Java | Vim+tmux @ 100% duty cycle ([.vimrc](#))*
- Avoiding concurrency pitfalls, custom HALs and drivers, coherent architectures
- Multi-platform software ecosystems, GDB-style debugging, efficient workflows (git)

Certificates: **exida Functional Safety Practitioner (FSP):** *FSE 211/212, Safety Development*
- 24 professional-development hours / 2.4 continuing-education units

Involvement: **Badgerloop | Software Development Club:** *Building real products*
- (Former) Electrical Tech Director, Software & Controls Lead | Technology Chair

Awards: Badgerloop - Innovation Award (x2), Design Weekend 3rd Place
UW Madison - Intro to IoT Hackathon - First
HackIllinois - Best Use of Intel's Microcontrollers - Third
JP Morgan Chase Code for Good - Best overall commit
HuskieHack - CDK Evolution Award, Beyond the Assembly Line
WildHacks - Watchdogs 2 Device Security Award (MLH Sponsored)

