

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)

