Cell: (608) 381-1145 | **Email:** vaughnkottler@gmail.com | **Website:** vkottler.github.io | **GitHub:** www.github.com/vkottler

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*
- Firmware development-and-test tooling for highly distributed systems
- New hardware-simulation architecture for launch-vehicle, pre-flight testing (HITL)
- Support Falcon production and launch, improve software release cadence

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 (CS): **Programming:** *Prefer C/C++, Python, Rust, Go* | *Vim+tmux @ 100% duty cycle (.vimrc)*
- Multi-platform software ecosystems, GDB-style debugging, efficient workflows (git)
- Avoiding concurrency pitfalls, custom HALs and drivers, coherent architectures

Web Development (Full Stack): *Performant and Reliable | CI + DevOps Automation*
- TypeScript, JavaScript/Node.js, PHP, SQL, HTML5 & CSS3

DBMS & System Administration: *openSUSE, Ubuntu, CentOS/RHEL, [De|Rasp]bian*
- Puppet, Ansible, Docker & Bash script automation, server provisioning
- Apache/NGINX configs (mult. vhosts), DNS with SSL administration

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!)

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

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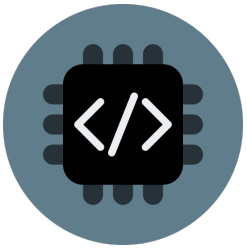
Involvement: **Badgerloop** | **Software Development Club:** *Building real products*
- (Former) Electrical Tech Director, Software & Controls Lead | Technology Chair

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)



YouTube tutorials: https://www.youtube.com/user/VEVOemployee

Made from scratch with LaTeX (*October 3, 2023*)