Cell: (608) 381-1145 | **Email:** vkottler@wisc.edu | **Website:** vdoer.tech | **GitHub:** www.github.com/vkottler

user@desktop:~$ Vaughn Kottler

Embedded Systems & Mechatronics, Full-Stack & Workflow Infrastructure

Education: **UW-Madison, Fall 2018** (Dean's List 5/7 Semesters, Summer 2016) *GPA: 3.45*
- Majors: Computer Engineering (Degree Program), Computer Science

Work: **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)

State Farm (Software Development Intern) *Summer 2016*
- Web app. with Spring Framework + Maven & Angluar.js 1.X, first TDD

UW-Madison College of Engineering (ULC Campus Tutor) *Fall 2016 - Present*
- Intro. programming, circuits, & digital logic courses

UW Plasma Physics (Student Hourly, Computing) *Spring 2015 - Spring 2016*
- My introduction to web development, system administration, PHP and MySQL

Skills (CE): **Schematic Design & PCB Layout, Processor Driver/Firmware Development, Verilog:**
- x86/ARM/MIPS/PowerPC development in C/C++ (some asm.) with modern build+test tools
- 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!)

Math & Signal Processing: *Kalman filtering & quarternions (gyro. + accel. work)*

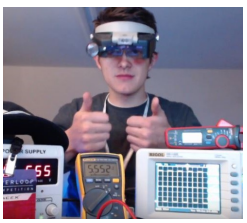
Skills (CS): **Web Development (Full Stack):** *Performant and Reliable | CI + DevOps Automation*
- Frameworks: Polymer, Angular [+Material Design], Bootstrap, none / from scratch
- Java EE, JavaScript/Node.js, PHP, SQL, HTML5 & CSS3, Go, Python

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
- [My|Postgre]SQL, MongoDB, CouchDB, Redis (as user and admin.)

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)

Involvement: **Badgerloop | Software Development Club:** *Extremely demanding, long-term projects*
- (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 (*September 13, 2018*)