Cell: (608) 381-1145 | **Email:** vaughnkottler@gmail.com May 8, 2020

Dear **SpaceX**,

I am fascinated by the problems solved by real-time compute systems and am seeking an opportunity to help achieve goals in space exploration.

As a Firmware Engineer, I am currently working in the autonomous robotics and warehouse automation problem domain.

Electronic/programmable systems that directly interface with humans have practical safety considerations, as a result I have gained experience in developing embedded software that complies with industrial standards at a negotiated integrity level.

My past SpaceX experience (as an intern) helped prepare me for understanding fault-tolerance in real-time systems, workflows with traceability requirements and applying first principles to problem solving in general.

A software engineering background has been a super-power for me in bare-metal firmware development. I've had the opportunity to contribute new build-system and in-circuit debugging tooling for my team, with the goal of providing a better developer experience.

Vetting and troubleshooting the correctness of a real-time software application can be challenging. Single instruction stepping is often necessary to isolate a bug, and an understanding of the underlying computer architecture of a processor is paramount in interpreting the flow of execution. I have enjoyed tracking down stack overflows occuring during a context switch and building a cycle-time backend to measure bandwidth used by task, interrupt and kernel contexts.

In the breadth of problems I have faced writing software, I have yet to be discouraged from giving my best and am less surprised each time I reach the limit of my current knowledge and expertise.

Thank you very much. I'm looking forward to your feedback,

Vaughn Kottler