

# ALEX KAISER

## SOFTWARE ENGINEER



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Raleigh, NC



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### SUMMARY

Resourceful and innovative Software Engineer with 2+ years of experience in designing embedded systems, FPGA applications, and full-stack web applications while utilizing coding languages, frameworks, and libraries such as VHDL, Verilog, Python, React, ASP.NET, TypeScript, C, and C++. Proficient in collaborating with product customers, translating requirements into code, and overseeing configuration management.

### EXPERIENCE

**DornerWorks Ltd.** January 2023 – August 2023  
*Lead Engineer – seL4 Doom Pendulum Demo* Grand Rapids, MI

- Managed a team of engineers to design an application that visually shows the benefits of a hypervisor
- Designed various embedded hardware and software drivers using VHDL, C, Python, and the AMBA AXI communication protocol
- Designed a printed circuit board to control motors and sensors

**DornerWorks Ltd.** August 2022 – January 2023  
*Software Engineer Co-op – FPGA* Grand Rapids, MI

- Accelerated machine learning algorithms by communicating with engineers to improve algorithm performance by a factor of 100
- Configured SoC's (System on a Chip) to run embedded applications
- Led team of engineers in areas of software development by hosting meetings to ensure project success

**DornerWorks Ltd.** May 2021 – August 2022  
*Software Engineer Co-op – Secure Technologies* Grand Rapids, MI

- Developed embedded firmware and device drivers for various SoC's
- Designed embedded applications to run in Linux virtual machines
- Designed code for full-stack desktop applications by utilizing React, TypeScript, and Python to enhance user experience

### PROJECTS

**Sports Bet Tracker Web Application** Project Manager

Designed a full-stack web application that allows users to track sports bets while managing a team of engineers. The application used ASP.NET core MVC, C#, AWS DynamoDB, AWS ECS, RESTful Web API, and bootstrap.

**TI-MSP432 Real Time Operating System** Engineer - Academic

Created an embedded multi-threaded real time operating system using the MSP432 microcontroller. Designed the operating system, kernel, and scheduler using C and ARM Cortex M assembly.

### EDUCATION

Grand Valley State University  
Allendale, Michigan  
August 2018 – December 2023

BS in Electrical Engineering  
BS in Computer Engineering

- 3.9 GPA
- Honors College
- Business Minor
- Tau Beta Pi Engineering Honors Society
- Deans list every semester

### TECHNICAL SKILLS

- C/C++
- Docker, AWS
- Python
- Git
- SQL/NoSQL
- VHDL/Verilog
- React, ASP.NET
- JavaScript/TypeScript
- Bash/Shell Scripting

### PROFESSIONAL SKILLS

- Embedded System Design
- Hardware/FPGA Design
- Full Stack Design
- Project Management
- Customer Interaction