

# ALEX KAISER

## SOFTWARE ENGINEER



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Raleigh, NC



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### SUMMARY

Resourceful and innovative Software Engineer with 3+ 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

#### Itron Inc.

*Embedded Software Engineer*

**April 2024 – Present**

**Raleigh, NC**

- Designed object-oriented applications using C++ and SQLite to fulfill project requirements and design constraints
- Solved a variety of critical software bugs using root cause analysis
- Profiled codebase to identify areas for CPU optimization and presented findings to upper-level management
- Designed new features and optimized a variety of desktop applications using ASP.NET

#### DornerWorks Ltd.

*Software Engineer Co-op – FPGA/Secure Tech*

**May 2021 – August 2023**

**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
- Accelerated machine learning algorithms by communicating with engineers to improve algorithm performance by a factor of 100
- Led team of engineers in areas of software development by hosting meetings to ensure project success
- Designed code for full-stack desktop applications by utilizing React, TypeScript, and Python to enhance user experience

### PROJECTS

#### Itron ToolSuite ASP.NET Desktop Applications

**Project Engineer**

Designed new features and optimized a variety of desktop applications that pull data from Itron's products over WiFi or USB. These applications are used by software engineers at Itron for debugging purposes.

#### 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 – January 2024

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