

# Aidan Jensen

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## Education

### **BS, Electrical and Computer Engineering**

Oregon State University - Class of 2015

*Minor: Computer Science*

## Awards and Patents

- Tektronix Presidents Award - 2019
  - "The President's Award recognizes recent graduates who clearly stand out among their peers with significant demonstrated achievements or technical leadership"
- [Hardware Protocol Trigger Patent](#)

## Work Experience

### **SW Design Engineer - Tektronix (5 years)**

Focused on developing new features and supporting custom hardware for Tektronix's latest series of Oscilloscopes

- Trigger HW/SW Implementation
- Led performance improvement efforts
- Debugged issues all throughout the system
  - Stress test issues
  - PCI-E driver issues
- Architecture Council Member
  - Member of a small group of engineers who led the architecture design and discussion for the Oscilloscope software platform
- Lead Integrator
  - Managed large code integration and merge conflicts
  - Strong git knowledge

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## Programming Languages

### **C++/C**

5 years of experience with C++11-17. Primary language used for development at Tektronix. Areas of expertise include:

- Multi-threaded applications
- Large plugin-based architecture
- Memory management
- Qt Cross Platform Framework
- Build tool-chain maintenance and development

### **Python**

10+ years of Python experience with all versions of Python. Areas of expertise include:

- Data processing and automation
- Python based test automation systems
- Virtual Environments, Packaging
- HTTP API interactions
- C++/Python binding/interactions

### **Proficient**

- Groovy
- Bash
- Batch
- perl
- javascript
- java
- qml
- Verilog/VHDL
- Markdown

# Technical Expertise

## Hardware Integration

- Experience designing and implementing hardware abstraction layers to create a future-proof Oscilloscope platform that could be implemented on a variety of platforms to fit different market needs.
- Designed and developed a platform to abstract inter-instrument communication. Allowing multiple generations of oscilloscopes to interface correctly
- Worked on an abstraction layer to combine serial bus decode definitions with trigger definitions

## Docker/Containers

- Helped develop build system containers as part of a Kubernetes cluster to create a continuous deployment system
- Experience containerizing a variety of services
  - Python
  - Build and Test environments
- Developed test containers to allow automated verification of defect fixes

## Build Systems/Continuous Integration

- Experience building and maintaining Continuous Integration/Continuous Deployment systems
- Code Coverage Integration
- Large codebase source control management and automation

## Software Quality/Unit Testing

- Unit test framework development for large interdependent code-bases

- Encouraged and pushed for a culture of test driven development and a focus on a *shift-left* philosophy and early testing
- Developed automated code coverage tools to help developers easily access code coverage information to enable increased coverage
- Led a push for more complete documentation, including moving documentation into the code for better discoverability

## Linux Memory Management

Diagnosed and debugged a number of memory management related bugs on a 32 bit ARM Linux platform. Using a 3rd party memory allocator I was able to manage large allocations (>250M) on a memory limited system.

## Project Leadership

Led a small team of upper level engineers to tackle performance issues with a newly released product. Interfaced with marketing and customers to identify customer pain points, and target direct solutions. In under 3 months the team was able to completely turn around the sales impression of the product, and it has had wide market success.

## General Experience

- Certified Scrum Master (Led a team for the past 3 years)
- Linux/Windows Driver debugging and development
- Strong knowledge of serial bus protocols
- Interest in general technology and tinkering

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## References

**Byron Faber** - SW Design Engineer (Tektronix)  
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**Walter Strand** - SW Design Engineer (Previously Tektronix)  
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