

# Devin Ivie

602-320-1098 | [devintvie@gmail.com](mailto:devintvie@gmail.com) | [www.devinivie.info](http://www.devinivie.info)

---

## HARDWARE DESIGN ENGINEER

Adaptable Electrical Engineer with five years of experience in hardware, firmware and software design. Proven ability to learn concepts and implement into a working product that meets design requirements.

### Areas of Expertise

- Microcontrollers
- Circuit Board Design
- Python
- Solidworks
- Verilog/VHDL
- FPGA
- Altium Designer
- Communication Protocols
- WPF / .NET
- Remote Access / Control
- Xilinx Vivado
- Fusion 360

---

## Professional Experience

JT4 LLC | Las Vegas, NV June 2015 – Present

**Electrical Engineer III** (Oct. 2018 – Present)

**Electrical Engineer II** (June 2015 – Oct. 2018)

- Program FPGAs using Xilinx Vivado IDE utilizing Verilog and VHDL
- Use C# and Python to create desktop applications
- Use STMCubeIDE to program STMicroelectronics microcontroller for TCP, SPI, UART and I<sup>2</sup>C communication as well as display control with code written in C
- Design printed circuit boards using Altium Designer and Fusion 360
- Solder and test boards to ensure requirements are met
- Use Git for source control
- Use Solidworks to design custom bent waveguide and to plan rack chassis layout
- Generate user guides for software and APIs
- Primary system administrator for Linux data collection network
- Use Raspberry Pis to control RF Power Meters over USB
- Generate documentation for hardware designs
- Use PCB mill to create prototyping circuit boards

ACSS (L-3 COMMUNICATIONS) | Phoenix, AZ

May 2014 – Jan. 2015

**Hardware Engineer Intern**

- Designed an automated test procedure to increase speed and reliability of hardware functionality tests
- Designed Graphical User Interface for testing hardware using C++ in LabWindows IDE
- Decided requirements and expectations for rack and test software
- Fixed long-standing problem with loading files into FPGA
- Implemented requirements and relayed information to engineering team and management
- Designed layout for rack containing all test instrumentation and connections
- Debugged every step of design, build and validation of software and hardware
- Attended meetings to provide updates from management about the project status
- Learned in-depth information of electrical components on PCBs

ARIZONA STATE UNIVERSITY | Tempe, AZ

Sept. 2014 – Dec. 2014

**Graduate Research Assistant**

- Attended regular meetings to discuss project-related progress
- Performed research on radar and radar detection methods
- Performed research on communication systems
- Programmed a simulation in MATLAB for a Joint Radar/Communications system based off ideas in a dissertation paper
- Wrote research paper explaining research and results from simulations

# Devin Ivie

602-320-1098 | [devintivie@gmail.com](mailto:devintivie@gmail.com) | [www.devinivie.info](http://www.devinivie.info)

## Professional Experience, cont.

WALMART VISION CENTER | Glendale, AZ

May 2008 – May 2014

### Licensed Optician

- Filled prescriptions for spectacles, contact lenses and customer service
- Performed exam preparation procedures for the optometrist
- Troubleshoot problems with patient's glasses or contact lenses
- Instructed new contact lens patients how to properly wear contacts
- Inspected prescriptions for proper power, multifocal measurements, and vision measurements
- Completed the National Opticianry Competency Exam (NOCE) and Contact Lens Registry Examination (CLRE) in May 2010
- Followed all state and federal laws including HIPAA regulations and dispensing policies
- Obtained Arizona Optician License in May 2013

---

## Education

**Master of Science in Engineering (M.S.E); Electrical Engineering (2015)**

Arizona State University, Tempe, AZ

**Bachelor of Science in Engineering (B.S.E); Electrical Engineering (2014)**

Arizona State University, Tempe, AZ

---

## Technical Skills

**Design Software:** Xilinx Vivado, Altium Designer, SolidWorks, Fusion 360, Visual Studio, Wireshark, Anaconda Python, STMCubeIDE, MATLAB, MathCAD, Omron Sysmac Studio

**Operating Systems:** Windows, Ubuntu, Raspbian

**Programming Languages:** VHDL, Verilog, C#, Python, C, MATLAB

**Hardware:** Xilinx FPGAs, STM32 Microcontrollers, Raspberry Pis, ESP32 Microcontrollers, Omron Motors,

**Lab Tools:** Oscilloscopes, Digital multimeters, Signal Analyzers, Signal Generators, Soldering Station, Power Meters

---

## Home Projects / Self-Improvement

**Personal Budget App** – Currently using MVVMCross, SQLite and Xamarin Forms to make this application cross platform. Previously used WPF for PC-only application and is due for an update.

**Modified Wine Fridge** – Recreating control unit on a small wine fridge to add WiFi and BLE controllability. Using different microcontroller will provide remote access to temperature setting and get temperature and humidity data via webpage or REST API.

**Personal Assistant** – Created Android-only application to listen for wake words then voice commands. Application uses Xamarin and can control remote hardware using REST API.

**Underground Wine Cellar Electrical Engineer** – Designed User Interface, programmed the motor system, planned power and communication connections.