# Elijah Stuart Wilkinson

Electrical Engineer

## Contact

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## Education

**University of North Texas**
Bachelor of Science in
Electrical Engineering
Graduated May 2017

**University of Texas at Dallas**
Attended August 2012 –
December 2014

**Collin College**
Associate of Applied Science
in Commercial Music
Graduated August 2012

## Skills

- Product Testing
- Research and Analysis
- System Solutions
- Quality Management
- Schematic and PCB
  Design

## Interests

- Overlanding
- Camping
- Skiing
- Playing Music

## Profile

Motivated Electronics Engineer with a 4-year background developing electrical solutions.  Skilled at designing, testing, verifying and developing components and systems.  Competent in Altium Designer.

## Experience

**TD Williamson, Contractor Electrical Engineer II**
December 2020 – September 2021
Design, build, test, and troubleshoot analog, digital, power electronics and mixed signal electronic circuits in support of new pipeline inspection tools.

- Reduced development time by three months by delivering many Flex and Rigid Flex designs in a short period of time, resulting in flex PCBAs being ordered months before they were needed for testing.
- Tracked failure modes and created testing documentation on a PCBA in-order to determine if design changes were needed to improve system reliability.
- Ensured quality of designs by creating specs and design documentation for Critical Design Review.
- Design, and troubleshoot electronic circuits.
- Revision refreshes to existing designs for expanded tool capability.
- Schematic Capture and PCB design (Altium)

**COLMEK, Electrical Engineer**
March 2019 – December 2020
Design, simulate, build, test, and troubleshoot analog, digital, power electronics and mixed signal electronic circuits that will be implemented into new and existing rugged computer product lines. This included running a ruggedized computer through mil-std testing for EMI/EMC and environmental testing.  I designed several systems that utilized PCIe, USB, UART, SPI, and I2C.  Supported and helped with the design of systems that incorporated FPGAs, Microprocessors, and Microcontrollers.

- Took ownership of failing end of line testers and performed sustainment engineering so that production could continue with a 10+ year old product.  This product had to meet strict production quality and testing requirements.
- Specified and oversaw environmental testing in accordance with MIL-STD 810G.  Helped develop operational tests which

prove and provide data to show that the product was working as expected. Worked with local testing houses to determine how tests needed to be performed. Scheduled and performed operational tests of product at testing houses to ensure the testing schedule was completed ahead of schedule.

- Design, developed and implemented testing methods and equipment.
- Design, build, and troubleshoot electronic circuits to include analog, digital, mixed-signal and power electronics.
- Architect, collaborate, create specs, and design documentation for electronics and test systems.
- Schematic Capture and PCB design (Altium)

**Krypton Solutions, Hardware Engineer**
October 2017 – March 2019
Responsible for delivering hardware designs, creating specifications, ensuring that all design and development is done according to our ISO process. I collaborate with other engineers, stakeholders, product management, suppliers, and plant personnel to define and meet system requirements.

- Board level design, this includes designing to client provided specifications.
- Schematic capture (Altium and Cadence), I've done schematic work to implement various Microcontrollers and FPGAs
- High speed design helped in the design of a series of USB3.0 hubs.
- Power Supply Design, I've designed systems that provided power for FPGAs, this included all component selection and determining proper sequencing during startup and shutdown of all voltage rails.
- Writing tests and supporting EMI/EMC testing at local labs.
- Supported both the bring up of initial prototype boards as well as troubleshooting problems with existing PCBAs.

**Ford Audio Video, Project Engineer In Training**
May 2017 – October 2017
Ford AV is a nationally recognized electronics integrator, they primarily design and install sound, video, and lighting systems. As a Project Engineer I would design Audio and Video control systems as well as program devices and create CAD drawings. Engineers also inspect and test systems on job sites.

- Worked on Job Sites
- Installed AV equipment according to drawings.
- Managed installation crews on job sites

**Austrian Micro Systems (AMS AG), Engineering Intern**
July 2016-August 2016
AMS manufactures optical, audio, and environmental sensors. The group that I did my internship underdeveloped solutions and uses for lighting and optical sensors.

- Worked on the Smart Lighting Integration Kit (SLIK) a device that maximizes natural light and allows for customizable lighting in office spaces.
- Troubleshooting/Debugging SLIK demo units
- Repaired SLIK demo units
- Testing of Firmware/Software releases
- Created minor pieces of production code