

[REDACTED] **E.I.**

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Education

B.S. ELECTRICAL ENGINEERING | 12/2019 | UNIVERSITY OF ARKANSAS

- Related coursework: Switch Mode Power Conversion, Special Topics in E.M.I., Power Systems Analysis, Microprocessor System Design

B.S. BIOLOGY | 06/2010 | UNIVERSITY OF ARKANSAS FT. SMITH

Minor in Chemistry

PARAMEDIC TECHNOLOGY | 06/1997 | UNIVERSITY OF ARKANSAS FT. SMITH

Experience

INTERNSHIP | PUSH PLASTIC | SPRINGDALE, AR | 12/2019 THROUGH 02/2020

- Developed an interface to allow serial communication between RS-232 laser micrometers and 3.3V CMOS single board computers.
- Using Python, developed software to actively obtain measurements of 3D printer filament during the manufacturing process and to perform statistical calculations using this data.
- Developed a GUI providing simplified adjustment and control of hardware while also displaying real time graphical and numerical displays of measurements and statistical calculations.

CAPSTONE PROJECT | UNIVERSITY OF ARKANSAS | 08/2018 THROUGH 05/2019

- Developed, in coordination with three other team members, a Class-D audio amplifier capable of delivering 100 W to a 4 Ω load.
- Designed, built, and tested a preamplifier featuring multiple inputs, adjustable gain, and active tone control circuitry.
- Participated in a public demonstration of the final design on the University of Arkansas campus.

RESEARCH ASSISTANT | UNIVERSITY OF ARKANSAS | 05/2018 THROUGH 08/2018

- Assisted a team conducting research and design using wide bandgap semiconductors.
- Designed a mixed-signal PCB for a two-channel, 1.2kV SiC MOSFET gate driver.
- Contributed to the redesign of existing hardware to comply with newly imposed size requirements.
- Participated in weekly meetings, discussing progress and goals with the research group.

SOLE PROPRIETOR | AVIATION AMPS AND EFFECTS | 07/2012 THROUGH 08/2017

- Design and construction of original guitar amplifier and effect circuits (vacuum tube and solid state).
- Troubleshooting and repair of original and commercially available guitar amplifiers and related equipment.
- Constructed gear for Joe Perry (Aerosmith), Trace Foster (Matchbox20, AC/DC, Aerosmith, others), and Andy Gallagher (The Violent Femmes).

PARAMEDIC | F.C.E.M.S, FT. SMITH EMS, ARK. PARAMED TRANSFER | 06/1997 THROUGH 08/2018

- Cooperated with an extensive and diverse team consisting of hospital staff, police, fire services, and other EMS personnel.
- Provided advanced life support to pre-hospital medical and trauma patients based on focused individual assessment.

Licenses and Certifications

- **Arkansas EI license #9141.**

Skills

- **Circuits:** Developing, testing, and debugging circuits and PCBs
- **Programming/Operating systems:** C++, Python, Bash, PIC assembly, Windows, Mac OS, Debian Linux
- **Software:** Pspice/Orcad Capture, LTspice, PowerWorld Simulator, Allegro PCB Designer, KiCad, MATLAB