

Darrell Henderson

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Executive Summary

- Electrical Engineering graduate looking to build a career in software development, machine learning, and embedded systems.
- Object oriented C++, Python, SQL database design and normalization, Linux bash scripting, project management in Git, and more.
- Technical lead on a project to use cortical learning algorithm to predict failures in industrial equipment.
- Identifies knowledge gaps and quickly and humbly develops necessary skills.

Education

Arkansas State University
BS in Electrical Engineering
GPA: 3.26

May 2017

Experience

St. Bernards Medical Center
Imaging Engineer I

September 2017 - February 2018

- Troubleshoot and resolved issues with Computed Tomography (CT), Magnetic Resonance Imaging (MRI), and linear accelerators.
- Worked closely with Linux command line and computer networking.
- Identified how medical devices behave and fail when used in the field.

Astate Research and Technology Transfer
Web and Database Application Developer

January 2015 – May 2017

- Provided administrative support in a Biotech Startup Incubator.
- Developed applications with MySQL, Access, PHP, Python, Tableau and more.
- Designed and maintained a database for the management of intellectual property and campus research.
- Worked with a team of developers using Git, Slack, and other project management software.

United States Department of Agriculture (USDA)
Research and Development Assistant

Summer 2014

- Worked with development team to create hardware and firmware for embedded device to track water levels in rice irrigation.
- Wired, soldered, and troubleshoot prototype boards.
- Experienced in designing scientific instrumentation with wireless communication and testing in the field.
- Developed a dynamic web based frontend to display irrigation information from RESTful API.

Leadership

Knallhart Agritech/I-Fund Cohort
Founder / Participant

September 2016 -December 2016

- Lead a team to explore an AgTech startup with a \$5000 investment.
- Communicated with dozens of potential partners and clients around the world.
- Experience in the LEAN startup method and LEAN Canvas.

Astate IEEE Student Branch
Chair

Fall 2013 – Spring 2017

- Chair of a student branch of a large international organization.
- Managed my team to organize of club events, speakers, and group projects.
- Organized and instructed a bi-annual workshop on μ controllers for freshmen.

Astate BSEE Ambassador

Fall 2014 – Spring 2017

- A speaker for several groups of prospective electrical engineering students.
- Assisted in organization and as Master of Ceremonies for the College of Engineering's Award Banquet.

Notable Projects

Neural System Health Monitor: Designed and managed a team through a project that utilized anomaly detection to predict failures in machinery. The system was able to detect simulated anomalies and intentional faults on a pressure washer with 95% accuracy. Provided technical leadership on the cortical learning algorithm, server setup, and personally handled the embedded firmware and WiFi communications. The project received attention of Technology Transfer for a potential patent.

Fuzzy Logic SumoBot Controller: Created a robotic controller using MATLAB and Simulink to maneuver a differential drive bot to push another out of a "sumo ring."

Research Compliance Document Recovery: Created a python app that recovered essential research compliance documents from an exported SQL database from outdated software. This project ensured the university could avoid potentially paying thousands of dollars in legal expenses and fines.

Relevant Skills

Linux, Mac and Windows	● ● ● ● ●	SQL + MySQL Workbench	● ● ● ● ●
Python [2-3]	● ● ● ○ ○	Microsoft Access	● ● ● ○ ○
C++14	● ● ● ● ○	Git Project Management	● ● ● ● ○
AVR Assembly	● ○ ○ ○ ○	LabVIEW	● ○ ○ ○ ○
HTML5 + CSS	● ● ● ● ○	MATLAB + Simulink	● ● ● ○ ○
PHP, and Laravel Framework	● ● ● ● ○	DMM, Oscilloscope, and Spectrum Analyzer	● ● ● ● ●
JavaScript	● ● ○ ○ ○	Circuit Analysis	● ● ● ○ ○