

Andrew Van Horn

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EDUCATION

MISSOURI S&T

BS ELECTRICAL ENGINEERING

BS COMPUTER ENGINEERING

Minor in Mathematics and Physics

May 2021 | Rolla, MO

GPA: 3.89 / 4.0

LINKS

Github:// andrewvh4

LinkedIn:// andrewvanhorn

COURSEWORK

Embedded Processor System Design

Computer Organization and Design

Electronics 1

Digital Signal Processing

Control Systems

Writing and Research

Technical Writing

Linear Algebra

Partial Differential Equations

Intro. to Complex Variables

Modern Physics 1 & 2

SKILLS

PROGRAMMING

Experienced:

C • C++ • C# .Net • Git • Python

Familiar:

LaTeX • Assembly • Matlab • LabView

VB .Net • HTML • JS • Qt • Linux

SOFTWARE TOOLS

Experienced:

KiCAD EDA • Wrike

Familiar:

NX CAD • Eagle EDA • SVN • P-Spice

EXPERIENCE

DE DESIGN WORKS | ELECTRICAL ENGINEERING INTERN

Jan 2019 – Aug 2019 | Earth City, MO

- Developed motor control interface software to expedite production and testing
- Developed control GUIs for production systems
- Assisted in hardware verification unit tests
- Worked directly with DE customers to fulfill project requirements

MARS ROVER DESIGN TEAM - MISSOURI S&T | ROLLA, MO

Chief Technical Officer (CTO) | June 2019 - Present

- Managed a team of over 100 students
- Led a team of 14 subsystem leaders in managing the design, assembly and verification of a Rover to compete in the University Rover Challenge (URC)
- Researched and implemented a project management software solution
- Communicated with team leads to receive regular updates toward project milestones
- Coordinated with other Executive Officers and the University to create an environment for success
- Will attend URC as leader of the 2020 competition team

Electrical Architect | June 2018 – May 2019

- Implemented trainings for new members to teach embedded hardware design and implementation
- Implemented unit test procedures to verify systems before release
- Reviewed and approved all designs for electrical systems
- Documented standards and best practices to ensure efficient production of all electrical systems
- Managed team's EDA component libraries
- Attended URC as part of the 2019 competition team, placed 5th in the world

Active Member Electrical Subteam | Aug 2017 – May 2019

- Developed interface driver for a charge coupled device to be used in the team's custom Raman spectrometer
- Developed spot welder PCB for use in battery pack assembly
- Developed a USB to JTAG programming board
- Developed a modular DC motor controller for use in a gimbal and soil collection system
- Attended URC as part of the 2018 competition team, placed 2nd in the world
- Published in International Telemetry Conference 2018 proceedings for work on a "Wireless Sensor Pod for Long-Term Data Collection"

RESEARCH

ELECTRICAL AND COMPUTER ENGINEERING | MISSOURI S&T

Researcher | Sept. 2019 - Present

- Worked with Dr. C. H. Wu in Theoretical Quantum Computing using Cellular Automata (QCA)
- Developed programs to assist in the discovery of new QCA structures and properties
- Assisted in drafting, formatting, and compiling numerous manuscripts for journal submission
- Contributed and analyzed theories on general-purpose Quantum Computing