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

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

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