

# Jordan McGhee

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## Professional Summary

Aspiring Digital Design Engineer with a strong foundation in computer engineering and hands-on experience in FPGA development, microarchitecture design, and verification. Currently pursuing a Master's degree, with a focus on advancing skills in digital and electrical engineering. Passionate about leveraging innovative technologies to drive efficiency and performance in digital systems.

## Experience

### Electrical Engineering Intern

*Collins Aerospace*

*Jan 2023 - Aug 2023*

- Conducted physical verification of display devices, playing a key role in preparing them for DO-254 certification.
- Updated and performed detailed procedures for verifying the electronic components of the devices, ensuring compliance with developed procedures.
- Demonstrated strong organizational skills in managing verification processes and adhering to tight schedules.

### Research Assistant / Teaching Assistant

*Iowa State University, Ames, IA*

*May 2022 - Jan 2023, Aug 2023 - Present*

- Engaged in development work in Scala, modifying microarchitectures for performance evaluation.
- Utilized Cadence tools for power analysis and benchmarking to assess performance enhancements.
- Assisted students in developing RTL skills and taught various design approaches for MIPS processors.

## Education

**Master of Science in Computer Engineering** (Anticipated May 2025)

*Iowa State University, Ames, IA*

**Bachelor of Science in Computer Engineering** (Completed May 2023)

*Iowa State University, Ames, IA*

## Projects

### MIPS Processor Development:

- Developed a MIPS processor up to the point of generating layout using Cadence tools.
- Focused on architectural design, simulation, and layout generation.

### FPGA-Based GPU Implementation:

- Implemented a GPU on a ZedBoard FPGA platform.
- Involved in the entire design process from conceptualization to physical implementation.

### Digital Potentiometer Design:

- Created a digital potentiometer using Cadence tools.
- Emphasized on circuit design, simulation, and performance optimization.

### Custom MTCP Network Protocol Development:

- Developed a custom MTCP network protocol in C.
- Focused on network communication efficiency and protocol robustness.