

## EDUCATION

**North Carolina State University**, Raleigh, NC

B.S. Computer Engineering | Electrical Engineering | GPA: 3.78

May 2021

Relevant Courses: Data Structures and Algorithms, Topics in Data Science, Object-Oriented Design and Development, Internet Protocols.

Honors: Duke Energy ECE Scholar, Tommerdahl Scholarship Recipient, Dean's List, Eta Kappa Nu

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## WORK EXPERIENCE AND RESEARCH

**SAS Institute** | Software Engineering Intern (Year-Round) | Cary, NC

May 2020 – Present

- Collected metadata for cloud based (AWS, Azure, GCP) SAS software deployments for performance analysis.
- Used the software composition analysis tool, Black Duck, to manage security and license vulnerabilities in open source libraries used by SAS.

**FREEDM Systems Center** | Software Engineer | Raleigh, NC

September 2019 – May 2020

- Development of multithreaded embedded C applications. Used data structures and foreground-background algorithms to maintain high switching frequencies by utilizing timers and interrupts.
- Wrote firmware for the F28379D LaunchPad development kit to be used with power electronic converters.

**Cree Lighting** | Intelligent Lighting Engineering Intern | Durham, NC

May 2019 – August 2019

- Design of internal test board featuring 8-bit microcontroller (ATtiny1616) and wrote basic C firmware to increase test time of RF control sensors by 1600%.

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## SELECTED PROJECTS

**JPEG Style Image Compression System (MATLAB)**

- Programmed a lossy image compression system based on the JPEG standard. Utilized discrete cosine transforms to encode and decode compressed images.

**Automated Daily Newsletter (Python)**

- Interfaced with the OpenWeatherMap and Trello APIs to generate personalized weather reports, clothing recommendations, and list of items requiring action, delivered daily through email.

**Peer-to-Peer with Centralized Index (Python)**

- Implemented a simple peer-to-peer file sharing system using sockets and multithreading. Used a simplified HTTP format along with TCP to facilitate messages between peers and the server.

**NCSSU IEEE Student Branch Website (HTML/CSS/JS)**

- Management and development of static club website. Features integrations to Google Photos and Calendar, interactive hover effects over officers.

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## STUDENT INVOLVEMENT

**Institute for Electrical and Electronics Engineers** | President | Raleigh, NC

- Organize recruitment events, technical talks from partner companies, hackathons, robotics competition teams, and numerous networking opportunities.
- Led establishment of IEEE Scholarship, a merit based financial award for NC State ECE students to be selected by former Presidents.

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## SKILLS

- C/C++
- Python
- Java
- Ruby/Rails Framework
- Git
- Linux