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JOHN BUMGARDNER

github.com/johnbumgardner johnbumgardner.github.io

EDUCATION

North Carolina State University, Raleigh, NC

B.S. Computer Engineering | Electrical Engineering | GPA: 3.76

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, Eta Kappa Nu

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
- 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 foregroundbackground 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%.

SELECTED PROJECTS

Open Source Contributions to Expertiza (Ruby on Rails/JQuery)

- Increased RSpec test coverage on assignment model and added feature to allow users to sort assignments by a variety of criteria.
- Implemented a view to retrieve sortable reviews and reports. Implemented using JQuery library and followed test-driven development procedures.

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.

NCSU 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.

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.

SKILLS

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

- Git
- Linux
- HTML/CSS
- **SOL** Databases