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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 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%.

SELECTED PROJECTS

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

- Made impactful contributions to a web-based learning system where students can submit and peer review assignments.
- Added features to sort report by an instructor, increased test coverage on specific models, found and corrected bugs leading to crashes.

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
- SQL Databases