RACHEL E JOHNSON

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EDUCATION

University of Notre Dame *Aug 2020 - May 2024*
BS in Physics, Glynn Family Honors Program *Notre Dame, IN*

GPA: 3.84

Selected Coursework: Linear Algebra, Real Analysis, Multivariable Calc, Mechanics, Physics - E & M, Circuitry

SKILLS

Experienced: LaTeX, Java, Linux, HTML
Familiar: Python, SQL, Qiskit, C#, CSS, React, WordPress, Agile, Jenkins, Git, SVN, AWS, Azure, SSMS, Exceed, Bash, Kornshell, RHEL, Kali, GIMP, Networking, Hardware

EXPERIENCE

Lockheed Martin Space *June 2021 - Aug 2021*
Linux Systems Intern *Littleton, CO*

Supported the Geostationary Operational Environmental Satellite (GOES) IT team with various hardware and software needs such as setting up and updating servers, creating an internal website for streaming camera feeds, running cables in the clean room, and mitigating vulnerabilities.

Lockheed Martin Aeronautics *June 2020 - July 2020*
Software Engineer Intern *Fort Worth, TX (Remote)*

Developed a Business Asset Management tool using C# to expedite and organize hundreds of change requests for the F-35 aircraft and communicated my progress in an Agile team environment.

PROJECTS

Campfire *Hesburgh Hackathon | Apr 2021 - May 2021*
Lead Web Developer *University of Notre Dame, IN*

Used React JS, HTML, and CSS to develop a web app that builds community and eliminates food waste. Through the app, users can view a system of food cameras installed in their community (i.e. dorm kitchens or lounges) that allow people to share leftovers. **3rd Place Team**

Calculating e Using Monte Carlo Methods and Quantum Amplitude Estimation *iQuHACK | Jan 2021*
Team Airier-Lei *MIT, MA (Remote)*

Implemented a Monte Carlo simulation using Qiskit to estimate the mathematical constant, e and applied a quantum speedup algorithm to increase efficiency.

Drip Drop *Wacode 2020 | Feb 2020*
Project Developer *Baylor University, TX*

Built a website using HTML, CSS, and Bootstrap to educate users on water conservation through projects and quizzes. Prototyped an irrigation system using an Arduino to optimize for humidity and mitigate water loss. **2nd Place Team**

MathWorks Math Modeling Challenge *MathWorks | Feb 2019, Feb 2020*
Research Specialist, Team Lead *MathWorks, MA (Remote)*

(2019) Built mathematical models to answer questions regarding substance use and abuse. Wrote paper with results. Used regression techniques to model the spread of e-cigarette use over time. **Honorable Mention Team**

(2020) Modeled problems related to the infrastructure and adoption of electric semi-trucks. Wrote paper detailing ideas.

AWARDS & MEMBERSHIP

Society of Physics Students *2020-Present*
Officer 2021-Present
Lockheed Martin STEM Scholarship Recipient *2020-Present*
NCWIT Aspirations in Computing Member *2020-Present*
Society of Women Engineers (SWE) Scholarship Recipient *2020*
National Merit Finalist *2020*
Girls Go Cyberstart CTF Finalist, Scholarship Recipient *2019, 2020*