

John Butterfield

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PERSONAL SUMMARY

Computer Science graduate from NC State with experience in full-stack development, integrating cloud services, databases, and user interfaces. A versatile developer with strong technical focus, clear communication skills, and a commitment to quality, fairness, and continuous growth.

EDUCATION

North Carolina State University, College of Engineering

Graduation: December, 2025

Bachelors of Science, Computer Science

Raleigh, NC

- **GPA: 3.73/4.0**
- **Dean's List:** 2021 Fall, 2022 Spring, 2022 Fall, 2023 Fall, and 2025 Spring Semesters
- **Relevant Coursework:** Software Engineering, Java, C and Software Tools, Data Structures and Algorithms, Operating Systems, Python, Networking, IoT Systems, Ethics in Computing

TECHNICAL SKILLS

- **Programming Languages:** Java, Python, C, HTML/CSS, JavaScript, R, Julia, Solidity, SQL, Bash
- **Developer Tools:** GitHub, Git, Linux, Docker, AWS (S3, Lambda, IoT Core), MySQL, MQTT, React

PROGRAMMING PROJECTS

FreeFlow Forum | *React, Python, SQL, Blockchain*

- Member of a Student team building a full-stack decentralized crowdfunding platform with React, FastAPI, and Solidity smart contracts on the Ethereum Sepolia Testnet for token-based governance and staking.

Loan Risk Machine Learning Classifier | *Python*

- Developed a machine learning pipeline using scikit-learn to predict loan default risk from applicant data.
- Implemented Random Forest with preprocessing, one-hot encoding, scaling, and custom feature engineering. Evaluated model via accuracy, confusion matrix, ROC, and precision-recall curves.

Raspberry Pi Cloud Photo Frame | *Python, AWS, MQTT, Raspberry Pi*

- Built a real-time photo sharing system using a Raspberry Pi, AWS IoT Core, and MQTT to publish images triggered by a physical button connected via GPIO programming. Used AWS Lambda to process and store photos in S3, with a client subscribing to updates for live slideshow display.

Encrypted File Transfer System | *C, Python*

- Developed a secure file transfer system for local networks using C for Block cipher encryption and Python for socket programming and real-time networking with network speed tracking and error correction.

Portfolio Website | *React, TypeScript, HTML/CSS*

- Designed and deployed a dynamic, responsive personal portfolio website using React, TypeScript, and Bootstrap to showcase technical capabilities and project work, deployed at smugdrip.github.io

TECHNICAL EXPERIENCE

FreeFlow Networks | Raleigh, NC

January 2025 - May 2025

Web-3 Developer Intern

- Designed, engineered and deployed blockchain-based funding solutions with transparent voting and staking mechanics on Ethereum blockchain.
- Coordinated with front-end and back-end teams to integrate blockchain functionalities, ensuring a smooth user experience and streamlined development workflows.

NON-TECHNICAL EXPERIENCE

Community Service

- **Miracle League:** Help children with physical disabilities play baseball.
- **Cat Angels:** Filed paperwork and helped care for the cats at the Cat Angels rescue center.
- **Warehouse Project:** Served food to families, children, seniors, and individuals facing hunger in N.C.

Lowes Foods

February 2019 - April 2021

Gas Station Clerk

- Independently managed daily gas station operations, assisted customers, handled cash transactions, and used station systems to monitor pumps and adjust gas prices.

Cashier/Bagger

- Assisted customers with their purchases, answering questions and offering recommendations as needed

Capital Contracting

May 2021 - August 2021 & May 2022 - August 2022

Contractors Assistant

- Assisted in construction projects, including preparation, material handling, installation, and maintenance of job sites.