

# Dominic Mason

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## Education

### Virginia Commonwealth University

August 2018 – May 2024

*Bachelor of Science in Computer Science, Concentration in Software Engineering*

*Richmond, VA*

**Relevant Coursework:** Fundamentals of Software Engineering, Algorithm Analysis with Advanced Data Structures, Database Theory, Software as a Service, Intro to Software Analysis and Testing, Design and Implementation of User Interfaces

## Experience

### Spring Oaks Capital, LLC

May 2022 – September 2022

*Software Engineering Intern*

*Richmond, VA*

- Engineered a robust web page for Heartwood, an internal control panel, integrating React and Material-UI components; enhanced user experience and streamlined operations, increasing task completion speed by 35%.
- Maintained a FastAPI endpoint for processing Excel files, reducing manual processing time by 50%.
- Implemented data transformations using Pandas; automated Excel file conversions to .prn format.
- Configured AWS S3 for efficient data exchange, managing large file uploads and downloads.
- Contributed to scrum meetings, sprint planning, and demo presentations, ensuring timely delivery of features.

## Projects

### Rick and Morty Personality Quiz | *React, Axios, CSS, Netlify*

March 2024

- Built a React web application utilizing the Rick and Morty API to match users with characters based on personality traits.
- Incorporated real-time data integration with Axios, reducing data retrieval time by 35%, and launched interactive quiz modules that improved user retention rate by 20%.
- Achieved over 500 user engagements within the first month of launch.

### Online Shopping Website | *Tailwind CSS, Flask, SQLAlchemy, GitHub Pages*

June 2024

- Developed a comprehensive online shopping platform with a responsive user interface using HTML, JavaScript, CSS, and Tailwind CSS to ensure a seamless experience across various devices.
- Implemented dynamic data fetching and rendering of products using JavaScript, enhancing user interaction and experience.
- Set up RESTful API endpoints to handle product data and cart functionalities, using Flask for back-end services.
- Managed and manipulated product data using SQLAlchemy, providing efficient database interactions and operations.
- Integrated cross-origin resource sharing (CORS) to enable secure API communication between the front-end and back-end.

### WiFi Sensing-based Occupancy Monitoring Project | *Raspberry Pi, ESP32*

August 2023 – May 2024

- Developed a non-invasive system to monitor room occupancy using WiFi signals, minimizing privacy concerns.
- Utilized Raspberry Pis and ESP32 devices to collect Channel State Information (CSI) data for occupancy detection.
- Implemented machine learning models to process CSI data, achieving up to 92% accuracy in predicting the number of occupants.
- Demonstrated the potential for scalable, cost-effective deployment using existing WiFi infrastructure in various building environments.

## Technical Skills

**Languages:** Python, Java, C/C++, HTML/CSS, JavaScript, SQL

**Developer Tools:** VS Code, Git, Docker, AWS (EC2, S3), Eclipse, Postman

**Technologies/Frameworks:** React, Material-UI, Tailwind CSS, Flask, FastAPI, Express.js, JUnit, pandas, Axios

## Professional Development / Certifications

### WebRams - Web Development Club at VCU

Fall 2023 – Spring 2024

*Member*

*Virginia Commonwealth University*

- Participated in coding workshops, collaborated on projects, and networked with developers and industry professionals.

### Legacy Full Stack Certification

June 2024

*Recipient*

*freeCodeCamp*