

# Brendan McGuire

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## Education

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### Clemson University

*Bachelors of Science, Computer Science; Minor, Mathematical Sciences*

Graduate May 2023

GPA: 3.93 / 4.00

- President of Clemson VEXU Robotics, a 501(c)(3) non-profit organization affiliated with University that facilitates university competitive robotics team. As President, managed 5 technical teams with over 50 members to design, build, program, and compete with a robot to complete a yearly challenge.

## Experience

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### Boeing

*Clemson School of Computing Capstone Internship*

September 2022 – Present

Clemson, SC

- **Technologies:** Rust, Node.js, Python, HTML, CSS, JavaScript
- Created and programmed hardware device to maintain temperature for Cold Storage Volume in parallel with Boeing's existing development.
- Integrated microcontroller with temperature sensor and compressor to maintain temperature specifications
- Developed custom web interface to control and monitor hardware devices remotely

### Epic Systems

*Software Development Intern*

May 2022 – August 2022

Verona, WI

- **Technologies:** TypeScript, React, C#, Microsoft SQL Server, ChakraUI, @airbnb/visx
- Created a customizable dashboard used by hospital IT administrators to see an overview of their deployment of Epic Software
- Designed and optimized SQL Stored Procedures to quickly highlight statistics about the deployment of up to 250,000 machines and notify users about metrics beyond thresholds
- Implemented abstraction to allow developers to quickly create customizable, drag-and-drop cards with visualizations to highlight metrics.

### Clemson Energy Visualization & Analytics Center

*Software Engineering Intern*

May 2021 – January 2022

Clemson, SC

- **Technologies:** TypeScript, React, Next.js, React Native, Node, OracleDB, Microsoft SQL Server, Git, Lerna, Next.js, Tailwind, Framer Motion, Docker
- Developed cross-plaform data collection system to quickly gather end-user thermal preference data
- Integrated with building control systems to pair thermal preference data with building and outside conditions
- Incorporated with Machine Learning Pipeline to deploy custom recommendation system for users.

### Robotics Education and Competition Foundation

*Event Support Specialist*

September 2021 – Present

Dallas, TX (Remote)

- Supports K-12 educators hosting competitive robotics events throughout South Carolina
- Provides on-site technical support, rules clarifications, conflict resolution, and to further the nonprofit mission to increase STEM engagement for K-12 students
- Division Manager for the 2022 VEX Robotics World Championship

## Projects

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### *tm-obs-switcher (JavaScript, Node.js)*

Livestream automation for robotics tournaments, integrating with OBS and ATEM to change the program scene when matches start automatically. Used at over 30 live robotics competitions every year.

Source:

<https://go.bren.app/tm-obs>

### *CSS (Rust)*

A fully featured CSS parser and minifier written in Rust, following the W3C CSS Syntax Module Level 3 specification.

Source:

<https://go.bren.app/css>

See more projects on GitHub: <https://go.bren.app/github>