

## Education

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### Clemson University

May 2021 // Clemson, SC

- > **Major:** Computer Science, Bachelor of Science (Overall GPA 3.87)
- > **Minor:** Business Administration
- > **Notable Courses:** Advanced Algorithms & Data Structures, Machine Learning (ML), Artificial Intelligence (AI), Mobile Development (Android, Java, iOS, Swift), Cloud Computing (AWS), Human-Centered Computing, Virtual Reality (VR), Networking

## Employment

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### Associate Applications Engineer @ Medidata Solutions

Aug 2021 - Present // New York, NY

Randomization and trial supply management system: external app allowing clinical trials distribute and randomize drugs.

- > Boosted performance of an object sharing service by 8x that handles millions of objects being filtered and written to the database by reducing the computation load with adding more constraints to the queries.
- > Refactored legacy React components into hooks to increase reusability by 50% and to increase readability.
- > Integrated a cohesive React state management pattern for increased scalability and readability
- > Fixed a bug that allowed users to input duplicates into 4 database tables dealing with thousands of rows with production data.
- > Pioneered PACT contract testing for the system to increase confidence in successful connections to other services.
- > Collaborated with other products to establish contract testing as a common practice between services for more reliable requests and responses across the company.
- > Developed Sumo Logic analytics queries to alert developers when users were experiencing errors, therefore, allowing us to get on top of errors before the user could submit a critical incident ticket.
- > **Leveraged knowledge:** Object Oriented Design principles (OOD), Test-driven development (TDD), APIs, GIT, Ruby on Rails, React, JavaScript, jQuery, MySQL, HAML, SCSS, SUMO Logic, Cron Job, RSpec, Jest, Cucumber, Regexp, AWS, Unix, Chrome Dev Tools.

### Full Stack Developer Internship @ BMW Group

May - Aug 2019 // Greenville, SC

BMW My Car Is Born: external app giving users updates on their car shipment.

- > Built 2 web apps from the ground up using React, Redux, GraphQL, and Apollo.
- > Implemented 2 web apps from 1 code base to increase code reusability by 2x using a custom webpack configuration.
- > Migrated from a RESTful microservice architecture with Redux to a single endpoint using GraphQL with Apollo Server to increase performance by 3x through the use of Apollo's advanced caching.
- > **Leveraged knowledge:** Microservice Architecture (APIs), Responsive Design (Mobile First Design), Test Driven Development (TDD), Agile, React, Redux, GraphQL, Apollo, SCSS, Webpack, JavaScript (JS), TypeScript (TS), Express, PostgreSQL, Docker, GIT, AWS, Unix, Chrome Developer Tools, code splitting, lazy loading, prefetching, PWA, Workbox service worker.

### Cloud Architect Internship @ BMW Group

Jan - May 2019 // Greenville, SC

Accommodated infrastructure support for 4 major web applications, each having microservices and in continuous development.

- > Composed 2 Kubernetes manifests for secure, production ready, end-to-end encrypted, highly available, MariaDB deployments.
- > Piloted serverless AWS Lambda functions and Kubeless functions for a microservice replacements to decrease equipment cost.
- > Developed Splunk Analytics queries to demonstrate user activity and feature effectiveness.
- > **Leveraged knowledge:** Highly Available, Horizontal Scalability, Kubernetes, Amazon Web Services (AWS), MariaDB, AWS Lambda, Docker, Regexp, Splunk, GIT, YAML, Kubeless, Unix, Galera Cluster, Master-Slave Cluster, MariaDB MaxScale.

## Personal Projects

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### Clemson Vocal Arts @ Clemson University

- > Designed and implemented Clemson University's Vocal Arts' website.
- > Created using GatsbyJS to increase performance and incorporated Netlify CMS to allow easy access to edit content.
- > **Technologies:** JavaScript (JS), GraphQL, GatsbyJS, Netlify, HTML/SCSS, GIT, Unix

### Clemson Tiger Band @ Clemson University

- > Designed and implemented 3 different websites for Clemson University Tiger Band and their associations.
- > The team has given multiple talks and presentations to other bands and at conferences about the website.
- > **Technologies:** HTML/SCSS, node.js, JavaScript, Gulp.js, Amazon CloudFront, GIT, Unix

### Personal Website: <https://nicholasgustafson.com>

- > For more projects and more information about my career

## Achievements

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Eagle Scout • Published Author @ CHI • Technology Students Association National Finalist • Trumpet Section Leader (x3)

## Skills

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(Fluent) Ruby, React, JavaScript, Rails, HAML, SQL, HTML/CSS, SASS, GIT, AWS, Jest, RSpec, Cucumber (Familiar) Apollo, GraphQL, Redux, Gatsby, Kubernetes, Docker, Bash, Python, C, C++, NoSQL, Java