

Nathan Johnson

Austin TX • (704) 907-4946 • rnj@clermson.edu • [portfolio](#) • [github](#) • [linkedin](#)

Experience		Skills
	Meshify • Apr 2017 - Jan 2019 <i>Software Engineer</i> <ul style="list-style-type: none">• Launched a completely new event-driven IoT SaaS product, built with Riot.js, Reframe.js, and Golang with relational and NoSQL databases• Helped save customers \$33 million/year with new product that was more powerful and feature-rich than legacy offering• Oversaw the launch of a pilot program that scaled from ~500 sensors to ~20,000 sensors with negligible latency• Created amazing experiences for users by developing UI and UX for Meshify's Admin and Dashboard web apps• Reduced scripting time on large tenants by up to 90% by writing a fast-loading SDK that fetches, filters, and loads thousands of relational data points on demand• Implemented Google Analytics tracking code to record application-specific data into custom reports for enrollment program participants, managed Meshify's Google Analytics account• Brought dynamically changing (<1sec) data views to a dashboards across the platform by utilizing WebSocket publish/subscribe technology	<ul style="list-style-type: none">• JavaScript• React.js• Riot.js• Ruby on Rails• CSS• Redux• Postman• SQL• Git• Golang• HTML• Swift• Bootstrap• Redis• jQuery• npm(Node.js)• C• Firebase• Visual Basic
	Keller Technology Corp • May 2016 - Sept 2016 <i>Electrical Engineer</i> <ul style="list-style-type: none">• Managed and optimized projects for automated custom machinery in telecommunications industry• Created upgrade kits for safety PLC's in a customer facility, shipped on time• Utilized customer input and management decisions, resulting in engineering goals met	
	ATS Automation • Feb 2015 - Jan 2016 <i>Controls Engineer</i> <ul style="list-style-type: none">• Optimized Siemens PLC's for automotive assembly lines using Ladder, STL, and GRAPH logic circuits• Interfaced external devices (robots, servos, nutrunners, presses, heaters) to PLC masters• Wrote specialized code for specific movements and routines, such as bolt torquing, elevator movement, servos, presses, and pick & place	
	Fives DyAG • Jan 2014 - Feb 2015 <i>Robotics Engineer</i> <ul style="list-style-type: none">• Provided effective and fast production support for automated manufacturing lines in high intensity environments, decreasing cycle time• Programmed robots in proprietary languages and increased path speed/accuracy in material handling applications	
	CB&I • Jan 2013 - May 2013 <i>Robotics Engineer</i>	

- Managed projects for a large manufacturing plant that specializes in plastic polymers
- Contributed to the upgrading of plant fire alarm systems and electrical control valves for moving and preparing of product

Education

App Academy • San Francisco, CA • November 2016 - February 2017

Full-stack web development course

- Rigorous 1000-hour web development course with <3% acceptance rate
- Topics include: Rails, JavaScript React, TDD, scalability, algorithms, OOP, coding style, single-page apps, and web development best practices.

Clemson University • BS • Electrical Engineering • Merit Scholar • 2012

- **Curriculum Highlights:** Circuit Theory & Design, Systems Programming, Electronics, Assembly Microcontroller Project, Electromagnetics

Projects

TuneHub • [website](#) • [github](#)

Fully-featured music-sampling site with song player, search, and user authentication

- Created a Ruby on Rails REST API that controls user, artist, song, and follow data on PostgreSQL tables
- Developed a client-side React.js application that requests data from the API and displays it on modular web components
- Pulled in relevant song and artist seed data through Ruby's RSpotify wrapper

Penelope the Penguin • [website](#) • [github](#)

Javascript

Endless survival game based on a classic helicopter game but with a twist

- Created a physics engine that models Flappy Bird and reverses gravity
- Formulated algorithms for swimming mechanics and impact detection
- Rendered shapes representing penguin, walls, game background, and obstacles

aNSR • [website](#) • [github](#)

Polling app for friends that allows users to post and vote on contentious questions

- Implemented full user authentication with a Firebase backend/database
- Built in a question, answer, and vote views in Swift 3 that query the database
- Designed a clean and colorful data visualization of vote data

Meshify Admin • [website](#)

Web admin app (Riot.js) to interface with Carbon API (Golang)

- Fetched resources from a relational database, displaying them in lists with full CRUD functionality
- Gave users full control of a complex file and node hierarchy for their organization's IoT SaaS Platform
- Built a permission based role system with security in mind

- Implemented websockets to fetch incoming sensor data from devices in the field through MQTT protocol

Meshify Dashboard • [website](#)

Responsive Dashboard (Riot.js) for past and present data values and trends

- Developed alarm based app showing severity, time, and sensor location info from the Carbon API
- Utilized on-demand fetching system to only fetch data for sensors currently displayed
- Implemented templating system that lets users design their own custom Riot.js components for displaying views
- Kept responsiveness in mind to ensure a clean UX on desktop or mobile