

# Brandon Clark

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## Education

University of North Carolina at Chapel Hill

B.A. Computer Science

Expected May 2018

## Skills

- **Languages:** Java, JS/TS (ES6), PHP, SQL, MongoDB, HTML5, CSS3/SASS, C/C#/C++, LABview, SAS, Arduino, Assembly, Shell Script
- **Frameworks:** NodeJS, Express, Angular, Ionic, Webpack, Jasmine/Karma, React/React Native, JQuery, LibGDX
- **Other Tools/Software:** Git, Bash, GDB, Figma, Chrome Devtools, Postman, Inkscape, Windows, Linux, Apache, Microsoft Office products, Adobe products, Unity, Blender, Anchor CMS, Eagle, KiCAD, Autodesk products, Google Sketchup

## Projects

### GymNOW (Play Store/App Store published)

- An Ionic (angular2) iOS/Android app for selling single use passes and managing gym classes
- Includes web dashboard for gym owners to manage multiple facilities, payment information, and check in customers
- Users can find gyms by price, classes offered, amenities, view photos of each location, and purchase passes for classes and gym access

### Calcuweightor (Play Store published)

- Ionic cross-platform app for calculating weights in the gym

### Malware Map

- An interactive map displaying geocoded malware IPs
- Includes a full CI build pipeline and integration/unit testing with Travis and Heroku integration
- Includes a small node/express service layer for managing the malware data

### Stop The Outbreak

- An interactive gaming experience developed for an exhibit at the Moorehead Planetarium
- Created custom node/websocket framework for synchronous gaming across 3 displays

### Personal Website

- An Angular2 based single page site to tell a little bit about myself and display all the projects I've worked on

### Electric Longboard Nunchuck Throttle Controller

- A wii nunchuck fitted with an arduino and 433Mhz radio for control of electric longboards

### Superpool Based Memory Allocator

- Created as a replacement for malloc
- Based on Hoard's SLAB allocation

### Bash Shell replacement

- A project to recreate many Bash functionalities (basic commands, piping, IO redirection, job management)

### Tree-based DNS Server

- A set of multi-threaded DNS servers that compare efficiency across varying locking coarseness on a tree of domains

### Macrotrack

- React native app for nutrient tracking

### Medieval

- A Node/Express/Websocket multiplayer browser game

### Minimail

- A material design gmail client written in electron

## Professional Experience

### Quantworks

Summer 2017

Full Stack Intern

Worked on a team developing the cross-platform Ionic framework (angular2) based mobile application, "GymNOW".

- Responsible for designing, building, and debugging Android and iOS apps and a web based management dashboard
- Converted mongoose based backend to a Java/Jersey/PostgreSQL to better suit application
- Developed a RESTful backend API, created database schema, unit tests, and build pipeline
- Wrote systems for managing user credentials, permissions, payment information, and business information
- Utilized agile development techniques to adapt to client requirements
- Used source control to facilitate team collaboration