Wenqi He

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EDUCATION

Atlanta, GA, USA **Georgia Institute of Technology** **Aug. 2015 - Dec. 2019**

- **Bachelor of Science in Computer Science** major GPA: 4.0/4.0, cumulative GPA: 3.97/4.0
- **Minor in Physics** (Graduate-level Coursework: General Relativity) `//galmungral.github.io/physics`
- **CS Coursework:** OOP, Algorithms & Data Structures, Analysis of Algorithms, Computer Organization, Operating Systems, Computer Networking, Relational Database, Information Security, Computer Simulation, Machine Learning (Incomplete)

EXPERIENCE

Front-end Developer, Intern **Pegasus CRM, Decatur, GA** **Jan. 2018 - May. 2018**

- Provided a proof-of-concept Vue.js reimplementation of existing UI features for the team to evaluate framework adoptation.
- Implemented designer's page designs using Blade PHP templates and SASS in a Laravel application.
- Integrated resizing and drag-and-drop features to existing data tables using vanilla JavaScript.
- Expedited bug fixing process by tracing into back-end code and identifying reported bugs that originate in the backend.

SOFTWARE PROJECTS `//github.com/GalMunGral`

SitBit *Accelerometer-based sitting time recorder. (Proof of Concept)*

- Utilized Core Motion framework on iOS (Swift) and the Sensor framework on Android (Kotlin) to detect acceleration.
- Created a GitHub-style calendar heat map based on (mock) data pulled from backend using D3.js and SVG.
- Embedded the visualization in mobile app using WebView on Android and WKWebView on iOS.
- Implemented the back end in Golang with a MySQL database.

ReSpotify *Reimplementation of Spotify music player*

- Recreated Spotify's playback/volume controls by integrating Spotify Web Playback SDK with a React.js UI.
- Implemented OAuth 2.0 authorization flows in Python using Flask framework to access Spotify Web API.

NoTube *Reimplementation of YouTube Website (Proof of Concept)*

- Partially replicated the UI using Angular.js and SASS. Implemented video streaming using Shaka player and FFmpeg.

WebREPL *Interactive shell in browser, as commonly seen on coding websites such as Codeacademy*

- Designed a mechanism to evaluate submitted scripts on server and send back output/error to be displayed in browser.
- Implemented using a parent Node.js process that communicates with a Python interpreter child process.

TwoFactor *Two-factor authentication with push notifications (Proof of Concept)*

- Implemented two-factor login using a Node.js backend that communicates with the login page through Socket.io.
- Crafted push notification requests to Firebase Cloud Messaging and to Apple Push Notification Service in HTTP/2.

MARTA Passenger Traffic *(Database Course Project)*

- Implemented the UI using React.js and Redux.js, and the REST API using Express.js framework and MySQL database.

Todo Apps *Implemented using React Native, Flutter (Dart), SwiftUI, UIKit (Objective-C), etc. (Proof of Concept)*
Clean Water Crowdsourcing *Mobile app based on Google Maps SDK and Firebase SDK (Android Course Project)*
Declarative DOM *UI state dependency/synchronization manager, inspired by frontend Web frameworks (Proof of Concept)*
Wikipedia Prerequisite Search *Breadth-first search of Wikipedia's citation graph (Incomplete)*
WolframAlpha CLI *Command-line utility for solving equations based on Wolfram|Alpha XML API*
WebSocket Server *Node.js implementation of WebSocket protocol*

TECHNICAL SKILLS

Proficient: Bash, Vim, Git, JavaScript (ES6), HTML, CSS **Familiar:** C, Java, Swift, Python, MATLAB, shell script, React.js, Redux.js, Angular.js, Vue.js, jQuery, Bootstrap, Node.js, Express.js, socket.io **Used:** Objective-C, C#, C++, Kotlin, Dart, TypeScript, SASS, PHP, SQL, Android, Xcode, UIKit, SwiftUI, React Native, Flutter, Xamarin, Jupyter Notebook, NumPy, Matplotlib, LaTeX