Wenqi He

+1 (470) 343 - 5207
hewenqi96@gmail.com

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 proof-of-concept reimplementation of existing UI features in Vue.js components for the team to evaluate adoption.
- Implemented UI designs for the Laravel Web application using Blade templates and Sass/SCSS.
- Added resizing and drag-and-drop features to existing data tables using vanilla JavaScript (ES6+).
- Expedited bug fixing process by tracing back-end PHP 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 Sensor framework on Android (Kotlin) to detect acceleration.
- Created GitHub-style SVG calendar heat map based on backend (mock) data using D3.js.
- Embedded the visualization in mobile apps using WebView (Android) and WKWebView (iOS).
- Implemented the back end in Go (golang) with a MySQL database.

ReSpotify *Recreation of Spotify music player*

- Recreated playback/volume controls in React, using Spotify Web Playback SDK under the hood.
- Established OAuth 2.0 authorization flows to access Spotify Web API in Python using Flask.

NoTube *Recreation of YouTube (Proof of Concept)*

- Partially replicated the UI using Angular and Sass/SCSS. Implemented video streaming using Shaka player and FFmpeg.

WebREPL *In-browser interactive shell, as commonly seen on coding websites*

- Designed a mechanism to submit and evaluate scripts and send back outputs/errors from server to display in browser.
- Implemented using a parent Node.js server process that communicates with a Python interpreter child process.

MARTA Passenger Traffic *(Database Course Project)*

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

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

- Created a login page that gets notified by the Node.js backend through Socket.IO when user confirms on mobile clients.
- Crafted push notification requests to Firebase Cloud Messaging and Apple Push Notification Service in HTTP/2.

WebSocket Server *Node.js implementation of the WebSocket protocol*
Web Components Router *Client-side routing using Web Components and native ES modules (Proof of Concept)*
DeclarativeDOM *UI state dependency and synchronization manager, inspired by frontend frameworks (Proof of Concept)*
WolframAlpha CLI *Command-line utility for mathematical computations based on Wolfram|Alpha XML API*
Wikipedia Prerequisite Search *Breadth-first search of an article's citation graph (Incomplete)*
Todo *To-do apps written in React Native, Flutter (Dart), SwiftUI, UIKit (Objective-C), etc.*

TECHNICAL SKILLS

Proficient: Bash, Vim, Git, JavaScript (ES6+), HTML, CSS **Familiar:** C, Java, Swift, Python, MATLAB, React.js, Redux.js, Angular.js, Vue.js, jQuery, Bootstrap, Node.js, Express.js, Flask, SQL **Used:** Objective-C, C#, Go (golang), Kotlin, Dart, TypeScript, Sass/SCSS, PHP, Socket.IO, Android, iOS (UIKit & SwiftUI), React Native, Flutter, Xamarin, Jupyter Notebook, NumPy, SciPy, SymPy, Matplotlib, LaTeX