Wenqi He

galmungral.github.io +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, Minor in Physics
- major GPA: 4.0/4.0, cumulative GPA: 3.97/4.0
- Relevant Coursework: OOP, Algorithms & Data Structures, Analysis of Algorithms, Computer Organization, Operating Systems, Computer Networking, Relational Database, Information Security, Computer Simulation, Machine Learning

EXPERIENCE

Frontend Developer, Intern

Pegasus CRM, Decatur, GA

Jan. 2018 - May. 2018

- Provided proof-of-concept reimplementation of existing UI features in <u>Vue.js</u> components for the team to evaluate adoption.
- Implemented UI designs for the Laravel Web application using <u>Blade templates</u> and Sass/SCSS.
- Added resizing and drag-and-drop features to existing data tables using <u>vanilla JavaScript (ES6+)</u>.
- Expedited bug fixing process by tracing back-end <u>PHP</u> 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 <u>SVG</u> calendar heat map based on backend (mock) data using <u>D3.js</u>.
- 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 <u>Angular</u> and <u>Sass/SCSS</u>. Implemented video streaming using <u>Shaka player</u> 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 <u>Node.js</u> implementation of the <u>WebSocket</u> protocol

Web Components Router Client-side routing using <u>Web Components</u> and <u>native ES modules</u> (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 <u>Wolfram Alpha XML API</u>

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