github.com/GalMunGral

Wenqi He

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EDUCATION

B.S. Computer Science, Georgia Institute of Technology *Aug. 2015 – Dec. 2019*

- Concentrations: Information Internetworks, Modeling and Simulation, Minor: Physics
- Graduated with Highest Honors (cumulative GPA: 3.97/4.0, major: 4.0/4.0, minor: 3.8/4.0)

EXPERIENCE

Software Engineer, Etude (`etudereader.com`), Atlanta *Sep. 2019 – Present*

- Implemented multiple features for the **Electron**-based smart PDF reader, including persistent non-contiguous text highlighting and table of contents parsing, which worked on 85% of user-uploaded PDF documents without bookmarks.
- Utilized **PDF.js** and applied **MVVM pattern** for the persistent highlighting feature.
- Fixed a race condition in the default PDF.js viewer between text layer rendering and background computations that caused some highlights to not render on large documents.

Front-end Engineer Intern, PegasusCRM, Atlanta *Jan. – May. 2018*

- Worked on a new feature of the PHP web application that allows merchants to organize potential customers into lists.
- Reimplemented main features of **jQuery** DataTables plugin in **Vue.js** to allow for future custom needs.
- Used **Jira** to manage assigned tickets and **Confluence** to manage internal documentation.

SOFTWARE PROJECTS

Georgia Tech Midterm Course Survey System (Web Application) *Aug. – Nov. 2019*

- Developed a full-stack web application for the Office of Academic Effectiveness at Georgia Tech that allows students to take surveys anonymously and lets instructors create/edit/close/delete surveys and view survey results.
- Used **MongoDB** to store survey templates and responses, and implemented a collection of **Angular** components to render survey forms dynamically based on template **JSON** fetched from the **Express/Node.js** back end.
- Integrated Georgia Tech Login Service (CAS) and Canvas LMS REST API to determine user type and enrollment status, and used **singleton Angular services** with **web storage** to manage user login state and data requests.
- Also used Puppeteer, ldapjs, Salesforce Lightning Design System and **D3.js**.

MARTA Public Transport Management System (Web Application) *Sep. – Nov. 2018*

- Developed a full-stack web application that lets MARTA passengers manage personal accounts, transactions and travel histories and lets administrators update station information and review overall traffic and revenues in a time period.
- Utilized **MySQL**, Sequelize ORM and **Express/Node.js** to build a REST API for the above functionalities.
- Used **Redux** with **React** and **React Router** to synchronize front-end application state such as login status and account balance with back end and across front-end routes/pages without making repeated network requests.
- Deployed the application on **Heroku** and ClearDB.

Online Python Console for Public Chats and Video Interviews (Web Application) *May. 2018 – Aug. 2019*

- Developed an online Python console that runs user-submitted Python code and also supports multiple public chat rooms and video interview channels, each with a dynamically spawned, dedicated Python REPL subprocess.
- Utilized **Socket.IO** and **Node.js** to broadcast one user's input/output to all users on the same channel.
- Implemented the video chat feature using **WebRTC** and built the signaling service for WebRTC in **Socket.IO**.
- Also used **React** and **webpack**.

Server Port Multiplexer for Heroku *Jul. 2019*

- Developed a system that allows multiple web servers on the same host to be accessed from a single port by translating between TCP port numbers and URL path prefixes using **service workers** and **Node.js**.

Lisp System in JavaScript *Oct. 2019*

- Implemented Lisp's s-expressions, `eval` function and macros in **JavaScript**.

Mini Visual Studio Code (Electron Desktop Application) *May. 2018*

- Developed a basic cross-platform desktop file explorer and text editor in **Electron** JavaScript framework.

Sitting Time Recorder (Mobile Application) *Jan. 2019*

- Utilized **iOS** Core Motion and **Android** sensor framework to detect vertical movements (standing up/sitting down).
- Implemented a calendar heatmap in **D3.js** to display recorded daily sitting time.

TECHNICAL SKILLS

Proficient: Python, JavaScript/TypeScript, CSS/SCSS, HTML, Bash, Git, Vim
Familiar: C, Java, Node.js, Express, React, Angular, Vue.js, jQuery, RxJS, Redux, MySQL/SQL, MongoDB
Used: iOS (Objective-C, Swift), Android (Kotlin), Xamarin (C#), Flutter (Dart), Go/Golang, PHP