Wenqi He

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EDUCATION

B.S. Computer Science, Georgia Institute of Technology (GPA: 3.97/4.0)   2015/08 - 2019/12

EXPERIENCE

JavaScript Engineer, Etude, Atlanta   2019/09 - 2019/12

- Implemented non-contiguous text highlighting and table of contents parsing for the PDF reader.

Front-end Developer Intern, PegasusCRM, Atlanta   2018/01 - 2018/04

- Implemented a new feature that allows merchants to group customers via drag-and-drop.
- Rewrote the core features of DataTables jQuery plugin in Vue.js to allow for future extensions.
- Implemented UI designs in Laravel Blade templates and SCSS/CSS.
- Used Jira and Confluence.

PROJECTS

Koala (front-end JavaScript framework)   2020/05

- Created a framework inspired by React, Vue, MobX and styled-components, with dependency tracking, batched updates, non-blocking rendering, component lazy-loading and dynamic scopes (contexts).
- Wrote a Babel plugin to implement a JS-based DSL in the form of nested function calls.
- Replicated Gmail UI using the framework, with client-side routing and Redux-like state management.

JavaScript-to-WebAssembly Compiler   2020/04

- Developed a compiler that outputs WebAssembly (text format) for a small subset of JavaScript.
- Implemented a shift-reduce parser based on the ESTree spec as an alternative to Babel parser.

MARTA Public Transport Management System   2017/09 - 2017/11

- Developed a web app that allows users to manage station info, card balances, travel histories, etc.
- Implemented two frontends using React and Vue. Also used MySQL, Express, JWT and Bulma.

Georgia Tech Midterm Survey System   2019/09 - 2019/12

- Developed a web app for the Office of Academic Effectiveness to collect student feedback.
- Used Angular to render survey forms from JSON-encoded survey templates and response data.
- Integrated Georgia Tech Login Service and Canvas LMS API to determine student enrollment status.
- Also used MongoDB, Express, Ajv, Puppeteer, Salesforce Lightning Design System and D3.js.

Online Python REPL Chat Room   2018/05

- Developed a chat room web app in Node.js based on dynamically spawned Python REPL instances.
- Used Socket.IO to broadcast messages and provide the signaling service for WebRTC video calls.

Mini Visual Studio Code   2019/05

- Developed a simple file explorer and text editor using Electron, React and styled-components.

Server Port Multiplexer (proof of concept)   2019/07

- Implemented a mechanism to deploy multiple applications on a single port by translating between TCP port numbers and URL path prefixes using service workers and a reverse proxy.

Sitting Time Tracker (proof of concept)   2019/01

- Utilized iOS Core Motion and Android sensor framework to detect standing-up/sitting-down motions.
- Created calendar heat maps using D3.js and SVG to visualize daily sitting time.