

ZHUOXIANG (SAM) XIE

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EDUCATION

Bachelor of Chemical Engineering, McMaster University, Ontario, Canada

Jun 2019

LANGUAGES, FRAMEWORKS & TOOLS

JavaScript, Python, Java, C, HTML, CSS, React.js, Redux, Redis, PostgreSQL, MongoDB, Node.js, Express.js, Django, D3.js, Jest, Git, AWS EC2, Docker

PROJECTS

Big-O Simulator (React.js, D3, Redux) [Demo](#)

- Visualizing the time complexity of different sorting algorithms using frontend frameworks Redux, React.js integrated with D3.js
- Reconfiguration of sorting algorithms based on React Hook rendering pattern to generate the corresponding automation behaviours

Irrigation Panel (React.js, Node.js, MongoDB, Google Maps API) [Demo](#)

- Utilization of multiple 3rd party APIs, OpenWeatherMap API, Google's Maps JavaScript API and Stormglass Marine Weather API
- Optimized the asynchronous feature of JavaScript in integrating large geolocation JSON file with Google Maps JavaScript API to produce dynamic weather predicative zones using wind direction
- Forecasted weather condition 4 hours ahead of time with an average 15% increase on prediction accuracy

Physicians Talking to Patients (Node.js, Socket.io, Express.js, PostgreSQL) [Code](#)

- A web-based tool designed for enhancing the remote communication between physicians and patients while enabling users from both ends to keep track of diagnosis/prognosis information through an organized format
- Database architecture design with 6 data tables using PostgreSQL
- Practiced authorization and security design using express-session in the application to improve its reliability and to protect users' personal data
- Implemented live chat/video features to enhance the quality of interaction between doctors and patients

Image Store (Python, Django, PostgreSQL) [Code](#)

- An application that serves primarily as an image storing platform
- Successful integration of Django template with frontend JavaScript for UI design
- Incorporated format conversion in database design to minimize the performance latency of the application

EXPERIENCE

Web Developer

LineDots Web Development (Open Source and Freelance Projects), Richmond Hill

May 2019 - Current

- Web design for H&L Premium Auto Service's homepage and portfolio page for university students
- Offered mobile compatible and responsive web design to optimize user experience
- Application deployment and cloud computing platform AWS configuration (mainly EC2, JavaScript SDK, Secret Manager, System Manager)

Engineering Project Coordinator (Coop Position)

Halton Region, Oakville

Jan 2018 – Dec 2018

- Review engineering drawings, single line diagrams, PFD, and P&ID
- Electrical I/O configuration and process control signal & interlock hierarchy validation