

Yong Bin (Ben) Gao

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[Portfolio](#)

[LinkedIn](#)

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Skills

JavaScript, React.js, Redux.js, D3.js, Ruby, Ruby on Rails, HTML5, CSS3, Git, PostgreSQL, jQuery

Projects

Greens (JavaScript, React / Redux, Ruby / Rails, HTML, CSS, Recharts.js, PostgreSQL)

[Live Site](#) | [Github](#)

Web application, inspired by Robinhood, that displays companies' stock prices and allows trading of virtual stock shares.

- Optimized SQL queries to efficiently access data by separating table into partitions, reducing client-side computation.
- Customized CSS in Recharts library to accurately present stock price data over different timeframes on charts with tooltips.
- Kept user and stock price information in Redux store/component state up-to-date by leveraging RESTful API.
- Reduced network latency and database tables by locally storing price data in component state.
- Ensured user privacy and data protection with authentication pattern that limits page navigation with React Router and protects password with BCrypt hashing function.

Electricity Energy Generation (JavaScript, D3.js, HTML5, CSS)

[Live Site](#) | [Github](#)

Web application with visualizations of electrical energy generated by year and energy source for all US states.

- Implemented D3.js to enhance the presentation of energy information with the geographical heat map, sunburst chart and stacked bar chart.
- Implemented a data formatting algorithm that parse and analyze energy information into objects structured with hierarchy suitable for different types of chart.
- Manipulated DOM elements to dynamically update and visualize different datasets with event listeners based on user input.
- Engineered seamless transition between datasets to allow control over the subset of data to display.

Experience

NYS Department of Transportation

Professional Engineer I

Nov 2018 - April 2019

Assistant Engineer

Sept 2015 - Oct 2018

Junior Engineer

Aug 2014 - Aug 2015

- Created 3D geometric design, using MicroStation's InRoads Suite, of a highway interchange ramp to improve traffic flow with land-use constraints.
- Performed traffic analysis within 2-mile radius to quantify the degree of improvement between current and projected level of services.
- Earned Employee of the Month award, as part of a team, for completing an accelerated maintenance project on schedule and within the budget of 5 million dollars.
- Maintained communication management with 9 agencies/companies to keep track of project progression.
- Supervised and trained 2 engineers to produce construction cost estimates, contract plans and vehicular safety analyses.

Education

App Academy

June 2019

Immersive software development course with focus on full stack web development.

Rensselaer Polytechnic Institute

Bachelor's & Master's in Mechanical Engineering

Dec 2012