Yong Bin (Ben) Gao

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Portfolio / LinkedIn / Github / AngelList

Skills

JavaScript, React.js, Redux.js, Ruby on Rails, HTML5, CSS3, Git, Firebase, AWS S3, D3.js, SQL

Experience

GoPlan   Live Site
Software Engineer   July 2019 - Present
- Engaged in initial planning of app including concept drafting, MVP feature design and tech stack selection.
- Setup MVC structure leveraging React/Redux and firebase as data storage.
- Developed CRUD operations and scalable components for user/trip/expense collections.
- Integrated Google Maps, PlaceService, OpenWeather, and Unsplash APIs to enrich destination information.
- Leveraged AWS S3 for receipt image storage imposing a file size limit and file compression to reduce latency and storage cost, as well as creating Firebase cloud functions to upload and delete files while protecting the API key and streamlining AWS API interaction through server side programming.
- Implemented responsive design for varying screen sizes for a fluid user experience.

App Academy
Technical Teaching Assistant   Aug 2019 - Present
- Debugged issues with 35+ students, in JavaScript, Rails, D3 charts, object collision and rendering in canvas.
- Provided advice on new feature implementation including database/ redux state design and information rendering within React components' life cycle.

NYS Department of Transportation
Professional Engineer I - Assistant Engineer - Junior Engineer   Aug 2014 - April 2019
- Created 3D geometric design, using MicroStation's InRoads Suite, of a highway interchange ramp to improve traffic flow with land-use constraints.
- Performed 2-mile wide traffic analysis to quantify improvements between current and projected conditions.
- Earned employee recognition award for delivering an accelerated maintenance project on schedule and within the budget of 5 million dollars.
- Led a team of two to produce construction cost estimates, contract plans and vehicular safety analyses.

Projects

Greens (JavaScript, React / Redux, Ruby / Rails, HTML, CSS, Recharts.js, PostgreSQL)   Live Site | Github
Web application, inspired by Robinhood, that displays and allows trading of virtual stock shares.
- Optimized SQL queries to access data by separating table into partitions, reducing client-side computation.
- Customized CSS in Recharts library to accurately present stock prices over different timeframes on tooltip.
- Leveraged RESTful APIs to maintain up-to-date user and stock price data in Redux store/ component state.
- Built authentication pattern to ensure user privacy and data protection by limiting page navigation with React Router and password protection with BCrypt hashing function.

Electricity Energy Generation (JavaScript, D3.js, HTML, CSS)   Live Site | Github
Web application with visualizations of electrical energy generated by year and energy source for all US states.
- Created geographical heat map, sunburst chart and stacked bar chart with D3.js library to visualize large electrical energy datasets.
- Developed algorithms to parse and analyze data into hierarchy structure object suitable for different charts.
- Manipulated DOM elements to dynamically visualize different datasets based on user input.

Education

App Academy   April 2019 - June 2019
Immersive software development course with focus on full stack web development.

Rensselaer Polytechnic Institute   Aug 2008 - Dec 2012
Bachelor's & Master's in Mechanical Engineering