

Zack Carlson

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GitHub: github.com/zackcarlson

Portfolio: zackcarlson.github.io

TECHNICAL SKILLS

- **Proficient:** JavaScript, React, React Native, Redux, TypeScript, Angular 2+, Jest, Enzyme, Mapbox, GraphQL, Apollo, Node.js, Express, MongoDB, SQL, PostgreSQL, MySQL, TDD, Jasmine, Mocha, Travis CI, HTML5, CSS3, SCSS, Sketch, Figma, Invision, DeckGL, Nebula, Storybook, CARTO, Constate, Turf.js
- **Exposure:** Protractor, Selenium, AWS, Python, Ruby, Java, Backbone.js, D3.js, ArcGIS, qGIS

WORK EXPERIENCE

Theorem | Front End Software Engineer | Remote

11/2020 - Present

- Engineered client-side public assistance website using React, TypeScript, Constate to digitize hundreds of PDFs into forms with intuitive UI/UX which improved user time to acquire assistance by over 200%.
- Enhanced Deck.gl map performance for land development management system by 50% using cached Mapbox GL JS markers to reduce unnecessary map re-renders.
- Delivered map overlay filter with manual draw tool using CARTO, Nebula.gl, Turf.js to help land development managers account for dozens of potential construction obstacles, reducing materials cost by 25% while adhering to zoning laws.

Interactive Advertising Bureau | Front End Software Engineer | Remote

07/2019 - 10/2020

- Prototyped e-commerce site for 100+ member companies using JavaScript, TypeScript, Angular 2+, Figma, Invision, and Stripe API, projected to increase company revenue by ~\$100 - \$200k annually.
- Architected JavaScript and React mobile-first website that provides user advertisement data for targeting ads.
- Revamped UI/UX of internal engineering portal using Angular 2+ and CSS3 to increase user accessibility.
- Wrote 10+ e2e tests for client-side components and fixed 30+ failing tests using Protractor resulting in 10% additional coverage of the codebase.

NewCraft | Software Engineer | Remote

08/2018 - 07/2019

- Developed 5+ client facing ecommerce and informatic applications utilizing JavaScript, ReactJS, and Redux, wireframing them with Sketch and Adobe XD CC, and saving company ~\$90K annually in UI/UX designer costs.
- Optimized page load speed from 5000ms to 25ms (99.5% improvement) by implementing more efficient data structures to store, sort, and process Bitcoin data queries using JavaScript, Node.js, Express, and MySQL.
- Built interactive phone carrier coverage map using Mapbox GL JS and React for a major telecom company.
- Ensured code quality and maintainability with 20+ unit tests using Jest/Enzyme to reduce technical debt.

UCLA BRITE Center | GIS Data Engineer | Los Angeles, CA

10/2017 - 08/2018

- Created and managed RDBMs and geo databases of up to 1 terabyte of spatial data, used in statistical analysis and policy decisions within the LA County urban planning department using Python, PostgreSQL, and ArcGIS.
- Designed and wrote complex spatial-ETLs with Python and ArcGIS ModelBuilder to load field data of tobacco advertisements near K-12 schools, which reduced the manual data entry by 200%.

PROJECTS

Actour (IMDB Clone) | Full Stack Software Engineer

2020

Movie credit application that displays actor filmography.

- Constructed search functionality that filters the IMDB API exclusively by actor names using GraphQL, which improved developer experience and maintainability.

EDUCATION

University of California, Los Angeles, B.A. Geographic Information Systems (GIS)

12/2017

VOLUNTEER WORK

CPR & First Aid Instructor | CPR Hero | Siem Reap, Cambodia

Dec 2017 - Jan 2018