


BRENTON HERSHNER

SOFTWARE ENGINEER /
PRODUCT MANAGER /
MECHANICAL ENGINEER

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SKILLS

Languages

Javascript (ES6)
HTML, CSS

Front End

React, Material UI,
Bootstrap, Redux, Router,
Webpack, Babel, jQuery

Back End

Node, Express, MySQL,
PostgreSQL, MongoDB,
Mongoose, NGINX

Deployment / Testing

AWS (EC2), Jest, Enzyme,
Testing Library, CircleCI,
K6, Loader.io

Other

Git, GitHub, Linux

EDUCATION

MASTER'S DEGREE

Business Administration
Miami University
2017 - 2019

BACHELOR'S DEGREE

Mechanical Engineering
The Ohio State University
2003 - 2008

SOFTWARE APPLICATIONS

ToPics

<https://github.com/Marineon/blue-ocean>

A photo sharing social network for concerts and events.

- Served as the project architect, managed the **GitHub** repo, enforced AirBnB **ESLint** rules, conducted or delegated code reviews, and integrated continuous testing with **CircleCI**.
- Added batch photo upload to an **AWS S3** bucket so multiple photos could be uploaded at once.
- Implemented the customer requested color scheme and a site wide dark mode using **Material UI**.
- Setup the **express** server written in **NodeJS** to serve static files and field api requests.
- Designed the api for communication between the browser and **MongoDB** database.

iRENTA

<https://github.com/LandLordsAndLadies/iRenta>

A web app for rental property management.

- Dynamically renders content and manages state using **React**. Used **React Router** for fast navigation and preserves navigation history with the performance of a single page application.
- Incorporated **Material UI** and custom **CSS** styling to quickly develop a mobile-first, responsive user interface with site-wide dark mode, which can be toggled.
- Implemented a server with **MongoDB** to be able to quickly iterate on data schema during development and rapidly change with the scope of the project.

TOBREGA

<https://github.com/tobrega/Tobrega-Products>

A backend api and database of product information for an ecommerce single page application.

- Utilized a **PostgreSQL** relational database to quickly retrieve records using a **pg** driver in production.
- Tuned **SQL** queries using **psql** and measured with **K6** to cut response time by half.
- Implemented **NGINX** as a reverse proxy and load balancer and tested performance with **loader.io** and **New Relic**, allowing scaling of the api for more traffic with increased fault tolerance.
- Deployed **AWS EC2** instances with **Ubuntu Linux** distributions to serve as the database, backend servers, and load balancer in the cloud so that no hardware needed to be maintained by the client.

PROJECT CATWALK

<https://github.com/Project-Codewalkers/Project-Catwalk>

A responsive product page for an ecommerce single page application.

- Implemented **React** for dynamic rendering so a user could browse without reloading the entire site.
- Utilized the **styled-components** framework to uniformly apply **css** for a consistent visual customer experience with a singular design language. Added **SVGs** for crisp, non-rasterized graphics.
- Distributed the bundled code with an **express** server which also acted as a proxy to add authorization when making **RESTful** api requests to a backend web server.
- Wrote unit and integration tests using the **Jest** and **React Testing Library** framework to verify compliance to the customers business requirements. Automated testing with **CircleCI** which allowed for faster development and reduced bugs in production. Analyzed test coverage using **Codecov**.

WORK EXPERIENCE

OPW

Product Manager / Mechanical Design Engineer

May 2013 to March 2021

- Responsible for a tens of millions of dollars product line. Brought products from conceptual stages through entire product life cycle. Led an effort to rationalize the product line by obsoleting poor performing products. This led to a year-over-year increase in profits in 2020 even as revenue fell as a result of the coronavirus pandemic.
- Granted two patents (a third is pending). Placed twice and won once in an annual innovation competition. Redesigning a new product which reduced the part cost by 2/3rds.

Ferno-Washington

Lead Electrical Engineer / Mechanical Engineer

July 2011 to May 2013

- Successfully reduced the electromagnetic interference (EMI) of strained electric motors to compliant levels for a medical device with no prior experience in EMI. Designed the interoperability between components and managed vendors' development to ensure functionality.
- Designed electronic plastic enclosures, assemblies, and wire harnesses to which met all relevant FDA requirements including IEC 60601-1, IEC 61960, IEC 60204-1, and UL 2054.