Mark Miw

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TECHNICAL SKILLS

Front End | JavaScript (ES5 and ES6), React, HTML5, CSS3, Redux
Back End | Node.js, Express, MongoDB, MySQL, PostgreSQL, Nginx, RESTful API Development
Testing/Deployment | Jest, Mocha, Chai, AWS: EC2 / S3
Developer Tools | Vim, Git, npm, Webpack, Babel, Agile Methodology, Scrum, TDD

SOFTWARE ENGINEERING APPLICATIONS

Front End Engineer | Rhydon | Rhydon Github Repo 2022
A clothing E-commerce app

- Architected the React front-end service of a photo carousel and pop-up modal with RESTful API backend
- Integrated React monitoring of user devices with styled components and CSS media queries to allow a responsive grid design that optimized site design across multiple mobile, tablet, and desktop devices
- Improved first contentful paint, first meaningful paint, and time to interactive by up to 300% by using dynamic and static compression, lazy loading, Cloudinary, and resized images

Back End Engineer | AlienX-Q-A | AlienX-Q-A Github Repo 2022
A microservice to an E-commerce app

- Created a highly scalable microservice to handle 5000 requests per second using four AWS EC2 micros
- Reduced PostgreSQL Insert and Update queries from 2s to 3ms with over 10 million rows of data by identifying several database bottlenecks with query planner and expensive nested filter clauses
- Ensured low latency (62ms) and 0.00% error rate for fast reliable consumption
- Utilized stress testing and monitoring tools such as K6, Loader.IO, and New Relic to pinpoint bottlenecks on a local machine and remote AWS Micro EC2 instance
- Implemented Nginx to provide caching and load balancing using the least connection load methodology which increased request throughput by 500% and post/put requests by 200%

Full Stack Engineer | Fairy Measure | Fairy Measure Github Repo
An automated body measuring application 2022

- Designed an automated body part measurement application using TensorFlow JS, React, MongoDB, and Bootstrap to provide users and relatable companies with detailed measurements of one's body
- Derived a methodology to estimate body parts by determining joint locations and general body part locations from Google's BodyPix and Body Part Segmentation models

Full Stack Engineer | Lucky Larry | Lucky Larry Github Repo
A casino gambling application 2022

- Designed a casino gambling application and assessed client's needs for the application within a limited time frame, negotiated demo features with client for initial release, and provided team with tools for success
- Collaborated with engineers to address and solve critical blocking issues throughout application development using Kanban workflow and promoting an agile work environment
- Designed a global chatroom and optimized site design across mobile, tablet, and desktop devices

PROFESSIONAL EXPERIENCE

Senior Electrical Engineer | Raytheon 2019-2022

- Processed terabytes of antenna data in order to validate hardware functionality and ensured a 0% error rate
- Optimized 100GE SERDES interface error tolerance by over 200% by testing all setting combinations, measuring its performance/error between in a space controlled environment (-55C and 105C) using Python
- Reduced circuit board testing by up to 240 hours by automating tests using Matlab, Python, Labview and validated all business requirement metrics were met

Circuit Design Engineer | Northrop Grumman 2018-2019

- Processed digitized antenna data into messages using Python and Matlab to validate hardware functionality
- Created scripts on Matlab to automate signal integrity analysis processes saving up to 20 hours per circuit board

Renewable Energy Engineer | Hawaiian Electric 2016-2018

- Modeled, analyzed, and verified over $300,000,000 of renewable generation saving up to $30,000,000 a year
- Derived unique solar metrics based on big data analytics to Hawaii's highly variable and penetrated grid
- Streamlined a company wide service to immediately identify grid outages caused by renewable energy generation by creating a script to analyze millisecond grid data, field sensors, and NOAA satellite data

EDUCATION

Hack Reactor | Advanced Software Engineering Certificate 2022
University of Hawaii at Manoa | BS Electrical Engineering 2015

- Introduction to C, Introduction to C++, Introduction to Matlab System Computing