

Joseph Nahm

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TECHNICAL SKILLS

Front End | JavaScript (ES5 and ES6), TypeScript, React, Redux, React Native, HTML5, CSS3, Tailwind, Next.js, jquery
Back End | Node.js, Python, Express, Nginx, PostgreSQL, MongoDB, Redis, Firebase, RESTful API Development, PM2
Testing/Deployment | Jest, Mocha, Chai, React Testing Library, Puppeteer, Jenkins, AWS: ECS / S3, Docker
Developer Tools | Vim, Git, npm, Webpack, Babel, Agile Methodology, Scrum, TDD, Linux

SOFTWARE ENGINEERING APPLICATIONS

Full Stack Engineer - Blue Ocean | React Native | Redux | Jenkins | MongoDB | Socket.io <https://github.com/Joenahm1937/BOC>
Social Media app that allows users to share self-destructing photos of pets

- Implemented real-time chat with websockets to reduce latency (originally using long polling strategy)
- Facilitated user data flow with Redux and handled user friendships with graph structure in MongoDB
- Setup CI/CD pipeline with Jenkins for node server deployed on EC2
- Debounced search queries and memoized callback functions to enhance client side performance

Frontend Engineer - Atelier | React Testing Library | Jest | React | Express | AWS EC2/S3 <https://github.com/Joenahm1937/FEC>
React front-end ratings service allowing users to view product ratings in an e-commerce store

- Increased **Google Lighthouse** performance from 49% to 97% by offloading user images and static assets to an **S3** bucket
- Tracked user metrics using **React HOC** and throttled API requests to minimize network traffic
- Used TDD to maintain code modularity and mocked servers to improve reliability in development

Backend Engineer - Atelier API | Node | Nginx | Express | Redis | PostgreSQL | Loader.io | New Relic https://github.com/Joenahm1937/atelier_sdc
API server interacting with PostgreSQL database to supply and store information to front-end

- Horizontally scaled a previously monolithic system to independently scale out **microservices** that required more hardware resources
- Automated the **ETL** process using a node stream/parser to load data from previous API to a separate **Postgres** database, consolidating relevant columns to avoid the need for **JS** manipulation and complex joins for every request
- Instrumented system to identify performance bottlenecks, then implemented SQL indexing, LRU **caching**, and **load balancing** to decrease average query performance from 200ms to under 70ms, allowing throughput of 1500+ **rps**
- Utilized a **systemd** script for AWS **EC2** instances and **Github** actions to automate deployment and updates

Full Stack Engineer - GRADYNT | React | Puppeteer | Material UI | Express <https://github.com/Joenahm1937/GRADYNT>
Web scraping service that extracts color palettes from search inputs with a web, API, and twitter interface

- Leveraged **Puppeteer** to scrape Google images, extract prominent RGB values, and respond to client using **Express**
- Established a single browser instance to avoid launching per request, reducing latency by 1s and avoiding possible memory leaks
- Implemented **server side rendering** to improve performance and SEO

Mobile Engineer - Sudorkle | React Native | Expo | Firebase | IOS | Android <https://github.com/Joenahm1937/sudoku-app>
React Native Sudoku application with a focus on simplicity

- Designed and built the interface, game logic, and animations of the home, stats, game page, and all relevant modals
- Stored game state and user-specific data in **AsyncStorage** and stored global stats in **Firestore** for offline data persistence
- Improved code readability and created separate app contexts by switching from props to **React's Context** API

Software Engineer - ColorSorter | React Router, Tailwind CSS <https://github.com/Joenahm1937/ColorSorter>
Sorting visualizer with adjustable parameters such as speed, sorting criteria (colors, size), batch size, and algorithm (heap, merge, etc.)

WORK EXPERIENCE

Engineering Lead | Naval Facilities Engineering Command | Santa Barbara, CA Spring 2021

- Designed a point absorber buoy that output 200 W at a depth of 100 ft using electromagnetic induction and periodic ocean heave
- Prototyped an underwater solar rig to obtain power output data vs. depth of silicon cells

Mechanical Engineer | Polydrops | Glendale, CA Summer 2020

- Applied design for manufacturing principles to optimize tear-drop trailer paneling cost, machinability, weight and thermal conductivity
- Used lean principles to organize an assembly line in our work-space, decreasing redundant supply and variability in product

Quality Engineering Intern | Northrop Grumman | Los Angeles, CA Summer 2019

- Used root cause analysis to identify Getter inspection process improvement while working with inspectors in Clean Room
- Substituted complex data-logging programs with simple spreadsheets to optimize throughput of inspection team

EDUCATION

Certificate, Advanced Software Engineering Immersive | Hack Reactor, US Remote 2021 - 2022

- 9 month software engineering immersive program, full-stack development

Bachelor of Science, Mechanical Engineering | University of California, Santa Barbara 2017 - 2021

- Cumulative GPA: 3.92/4.00 Dean's Honors List