

# Adam Gienapp

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## Software Engineering

### Technologies

**Front end:** JavaScript (ES5 and ES6), React, HTML5, CSS3, Bootstrap, Compass

**Back end:** Node.js, Express, Firebase, MongoDB/Mongoose, MySQL, PostgreSQL, RESTful API development

**Testing / Deployment:** Jest, Enzyme, Mocha, Chai, CircleCI, AWS EC2, Nginx, Artillery.io, Loader.io, New Relic

**Developer tools:** Git, npm, Webpack, Babel, Agile Methodology, XP Methodology, TDD, SOA

### Applications

#### ScratchTrack Web App

- A companion to the mobile app, allows users to access song library and handle account maintenance.
- Fully owned development of web app, built from UI mockups and feature specifications
- Integrated pre-existing Firebase back end to handle authentication, storage, and hosting

#### REI Mock System Design

- Redesigned and scaled the back-end of a pre-existing search bar microservice from an REI mock website
- Modelled application data in PostgreSQL, utilized GIN indexing to reduce query time in a data pool of 10M entries (worst-case latency reduced from 31 seconds to 2 seconds)
- Horizontally scaled to 4 EC2 micro instances behind an Nginx load balancer to increase throughput from 750 RPS to 3750 RPS with 71 ms average latency and 0.1% error rate.

#### All Day I Dream About Servers - a mockup of adidas' product detail page

- Created the 'Ratings & Reviews' microservice using React, Node/Express, and MySQL
- Generated unique review data for 100 products in MySQL to simulate real-world data
- Designed server-side data processing structure w/dynamic database querying to produce a lightweight client that only loads data necessary to render the page
- Utilized service-oriented architecture, built a proxy server to merge four microservices into one web app

## Education

**Hack Reactor** - Software Engineering Immersive

March 2020

**University of Michigan** - B.S. Mechanical Engineering

April 2009

- Relevant coursework: Computational Programming in C++ and MATLAB
- Sigma Phi Society: Treasurer (2008 - 2009)

## Professional Experience

### ScratchTrack | Remote

April 2020 - present

#### Front End Developer

- Fully owned web app development, built from provided UI mockups and feature specifications
- Integrated pre-existing Firebase back end to handle authentication, storage, and hosting
- Visit: scratchtrack.co

### Safran Cabin | Huntington Beach, CA

#### Lead Design Engineer

Sept 2013 - Nov 2018

#### Design Engineer

July 2012 - Sept 2013

- Developed mechanical aspects of aircraft interior structures from concept through production
- Designed modular lavatory ceiling that reduced part count, weight, production time, cost by 40+%
- Facilitated development of engineering core by mentoring colleagues and driving training/process reform

## Publications

Perosky, J., Rabban, R., Bradshaw, J., **Gienapp, A.**, Ofosu, A., Sienko, K. (2012)

"Designing a Portable Gynecological Examination Table: Improving Access to Antenatal Care in Rural Ghana",  
*International Journal for Service Learning in Engineering*, Vol. 7, No. 1, pp. 1-14