

**Nathaniel Grossman** Software Developer  
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## Technical Skills

Strong: Javascript(ES6/ES7), React, Redux, Node, Express, NoSQL, WebSockets, HTML/CSS, Git, Bootstrap, Travis CI  
Experienced: PostgreSQL, OAuth 2.0, AWS, Docker, jQuery, Mocha/Chai, Chrome Extensions, Webpack, Jest/Enzyme

## Experience

brom | Fullstack Engineer | *Configurable HTTP Transaction Auditing Tools* 2018

- Created a multifunctional application for recording and analyzing HTTP transactions to catch security vulnerabilities and promote best practices during development or in conjunction with continuous integration tools.
- Enabled transparent monitoring of HTTP transactions without any additional dependencies or operations by monkey patching XHR objects and the Fetch API to hijack all AJAX libraries at the lowest level.
- Reduced memory usage and response time of a reverse proxy server by using Node Transform Streams to dynamically inject a browser API hijacking script into HTML without first loading the entire document.
- Designed a rule syntax to provide end-developers an API for configurable testing of HTTP transactions, suited to both live testing and continuous integration workflows.
- Devised a schema to represent all components of an HTTP transaction in a minimal and reusable format that's versatile enough to work with various data generators without need for significant normalization by the client.
- Wrote a test suite in Jest's sandboxed environment to ensure deterministic evaluation of end-developer configurations and enforce logical consistency along application boundaries.
- Utilized Node's filesystem access to enable users to review previous auditing sessions by asynchronously writing the results of every transaction to a log file without blocking the thread of execution.
- Built a site to display documentation using Bootstrap and implemented a CI workflow to automatically update an Amazon S3 bucket, distributed over CloudFront, to expedite deployment process and minimize load times.
- Designed wireframes in Figma for all UI components to remove the guesswork from the front-end development process and ensure stylistic consistency across a team.

First Continent | Co-director and Web Developer | *Contemporary Art Gallery* 2015-2018

- Built a lightweight HTML/CSS/Javascript website to display and archive documentation of on-site exhibitions.
- Deployed and maintained the website and all assets to a hosting service via FTP.
- Designed a cohesive brand identity for the gallery's website, marketing, and print materials.

## Projects

Walker | *SMS Based Personal Safety Application*

- Constructed an SMS based user experience using the Twilio API to reduce buy-in and allow users to interact with the application in a way that is immediately familiar.
- Maximized data availability by configuring and launching an Amazon RDS instance to store user information.
- Deployed a Node server on AWS Elastic Beanstalk to interface between the SMS API and the client to ensure fault tolerance and scalability.

Photogenicus | *Machine Learning Application for Classifying Images from Remote Camera Traps*

- Implemented an image classification model to determine the presence of a subject in a photograph to expedite the process of sorting through batches of images.
- Improved accuracy of image classification model when determining the content of an image by assembling and modifying a diversified dataset to avoid over-fitting.
- Utilized React's component-based architecture to build a modular and extensible UI to visualize the training process.

## Education

Codesmith - Open Source Software Engineering Residency 2018

Tufts University - B.F.A. 2009-2014

- President's Research Grant

## Interests

I enjoy building, breaking, and repairing synthesizers, assembling scale dioramas, and observing the flora and fauna of LA.