

# PHONG NGO

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New York / New York

## SKILLS

React.js, Ruby on Rails, JavaScript, jQuery, Ruby, Redux, SQL, Git, HTML5, CSS3

## PROJECTS

### unLeashd

[Live Site](#) | [Github](#)

*An app to track which dogs users have petted using Ruby on Rails, JavaScript, React, and Redux.*

- Reduced flickering and React.js Component rendering speed by reusing elements in Redux Store Global State in different presentational components, and not refetching redundant information.
- Created RESTful routes in Ruby on Rails Controllers and querying PostgreSQL database with JQuery Ajax calls.
- Implemented dynamic querying to show subsets of data from database on index GETs to reduce load times and reduce database workload.
- Optimized component switching using normalized state shapes within the Redux Store.
- Accounted for unexpected user navigations and hard page refreshes within all frontend routes.
- Filtered backend responses using JBuilder gem to increase efficiency within frontend reducers.
- Saved images using Rails Active Storage and Amazon Web Services (AWS) S3 storage.
- Deployed to Heroku and organized images by utilizing Rail's helper methods for asset pipelines within both SCSS and Ruby files.

### Fortune Couple

[Live Site](#) | [Github](#)

*An app to calculate compatibility of users from user preferences, using MongoDB, Express, React.js, and Node.js*

- Chained success callbacks for asynchronous MongoDB promises using mongoose models to achieve querying for user's associated data.
- Worked on backend routes to return information using Express.js and Node.js and querying endpoints using Axios calls.
- Enabled user login with javascript web tokens in GET Request headers and Passport.js authentication tools.
- Calculated users Zodiac with utility tools by leveraging the sortability of ISO 8601 Datetime Format.
- Showed colorful images and styling using CSS.

### Soccer Fight

[Live Site](#) | [Github](#)

*A fighting game in which the user is a soccer ball and shoots lasers, built using JavaScript and Three.js*

- Presented a cohesive game using CSS and HTML elements.
- Utilized Three.js scene and camera manipulation to create collision detection.
- Removed lag by clearing mesh elements from scene when assets leave camera view.
- Applied collision, gravity, physics, acceleration, momentum, and velocity through arithmetic within util files.
- Implemented responsive canvas resizing through dynamic refresh frames within asynchronous rerendering loop.

## EXPERIENCE

### Traffic Engineer

*Town of North Hempstead, June 2018 - Nov 2019*

- Proposed and reviewed Traffic Ordinances for the Town Code with Town Board members.
- Coordinated with the Town Attorney's office and Town Clerk's office to adopt and rescind Traffic Ordinances..
- Advised the Town Board on how to respond to constituent requests.

### Signals Timing Engineer

*New York City Department of Transportation, Oct 2016 - May 2018*

- Designed Signal Operations for new and existing Traffic Signals.
- Programmed ASTC Traffic Controllers to reduce traffic congestion during rush hours.
- Updated databases for Transit Signal Priority for the Metropolitan Transportation Authority (MTA) and Pedestrian Safety Projects for New York City's Vision Zero initiative.

## EDUCATION

**App Academy** - Immersive software development course with focus on full stack web development (Winter 2019)

**Pennsylvania State University** - BS - Electrical Engineering (Winter 2014)