

# PHONG NGO

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**SKILLS** React, JavaScript, Ruby, Rails, SQL, Redux, HTML, CSS, Git, JSON, PostgreSQL, jQuery, MongoDB / Mongoose, Node, Express, Heroku, Three.js

## PROJECTS

### Unleashd

[Github](#) | [Demo](#)

*A networking platform for users to check in when they pet a dog, based on Untappd.*

- Developed a Rails API backend with endpoints for users, pet shops, dogs, and checkins.
- Used Activate Storage and Amazon Web Services S3 to upload and display media throughout application.
- Managed state and user experience with React and Redux for scalability.
- Implemented the user interface with fully CSS styling.

### Fortune Couple

[Github](#) | [Demo](#)

*A matchmaking app that calculates user's compatibility.*

- Developed a Node/Express with MongoDB database backend with endpoints for users, fortunes, and history.
- Utilized JavaScript Web Tokens and Passport.js for user login and authentication.
- Collaborated with the web development team and practiced good Git workflow to manage codebase.
- Calculated user's Zodiac from their birthday by leveraging the sortability of ISO 8601 Datetime Format.

### Soccer Fight

[Github](#) | [Demo](#)

*A fighting game in which the user is a soccer ball and shoots lasers.*

- Written in pure vanilla JavaScript.
- Presented a visually appealing UI using CSS classes and HTML DOM Element manipulation.
- Drew 3D components for game objects using Three.js.
- Used Lodash library to throttle user input.
- Used RequestAnimationFrame to change state of objects to smoothen gameplay and repainting of the canvas.
- Implemented responsive canvas resizing through dynamic refresh frames within asynchronous rerendering loop.

## EXPERIENCE

### Traffic Engineer

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

- Created 120+ new rescissions and adoptions in 2019 within the Town of North Hempstead's Traffic Code, and supervised the Town's Highway installation and implementation of the new law in the field.
- 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.
- Prepared and advised the Town Board on how to respond to constituent requests for monthly Town Board meetings.

### Signals Timing Engineer

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

- Designed 200+ Signal Operations for Traffic Signals for New York City's 18,000 Traffic Controllers.
- Programmed ASTC Traffic Controllers to reduce traffic congestion during rush hour.
- Updated databases for Transit Signal Priority for the Metropolitan Transportation Authority (MTA).
- Worked on Pedestrian Safety Projects for New York City's Vision Zero initiative.

## EDUCATION

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

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