

# Tony J Huang

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## SKILLS

**Frontend:** • React • Redux • HTML5 + Canvas • CSS3 • jQuery • Electron

**Backend:** • Ruby on Rails • ExpressJS • SQL • PostgreSQL • MongoDB • Rspec • Jest • Heroku • Socket.io

**Others:** • Ruby • JavaScript • R • MATLAB • Microsoft Office (VBA, Pivot Tables) • Creo/SolidWorks • Git • AWS S3

## PROJECTS

### Breakout-Webcam

[live](#) | [github](#)

*Classic Atari Breakout game powered by machine learning to play by waving hand.*

*(TensorFlow, JavaScript, HTML5, Canvas, CSS3, Webpack)*

- Incorporated hand gestures controls using TensorFlow to predict a multiclass classification from a trained convolutional neural network of frames captured by webcam.
- Formulated collision detection algorithm to remove brick and reflect off platform upon contact with the ball.
- Applied OOP to abstract and encapsulate classes for game, platform, bricks, ball, and webcam controls.
- Coded custom loading spinner that mimics gameplay with CSS.

### Kilogram

[live](#) | [github](#)

*Full stack clone of Instagram*

*(Ruby on Rails, BCrypt, AWS S3, ReactJS, Redux, Heroku, jQuery, Webpack)*

- Minimized FE code runtime for liking/unliking a post and following/unfollowing a user by devising an efficient denormalized data structure for the Redux state and API response.
- Implemented user authentication using BCrypt for salting and hashing passwords.
- Stored image uploads in AWS S3 to reduce server load and scale application.

### TeslaCam Video Player

[github](#)

*Desktop app to view recorded footage from all 4 Tesla sentry cameras simultaneously.*

*(Electron, ExpressJS, ReactJS, NodeJS)*

- Applied BFS to selected directory to get list of all recorded events.
- Used React hooks for handling state and applying effects to respond to keyboard inputs.
- Utilized link list to select next event to play in constant time.

## EXPERIENCE

### Chase

**San Francisco, CA**

Software Engineer

Mar 2019 - Present

- Build and maintain responsive ADA-compliant features for Chase.com with proprietary Vue-like framework.
- Collaborate with backend engineers, product, BSA, QAs and designers to deliver features in an Agile manner.

### Liberty Mutual Insurance

**Boston, MA**

Analyst - Modeling, Data Science

Jul 2016 - Aug 2017

- Created interactive HTML heat map visuals and generalized code to share with colleagues.
- Built catastrophe models in collaboration with senior director for competitive pricing.
- Aided underwriting team by conducting regional segmentation analysis with hierarchical clustering and k-means.
- Performed geospatial smoothing to counteract abrupt step-wise grouping.

## EDUCATION

### App Academy

**San Francisco, CA**

Graduate of a rigorous 1000-hour full stack web-development course.

2018

### Bentley University

**Waltham, MA**

Bachelor of Science, Actuarial Science; magna cum laude; Major GPA: 4.0

May 2014

### Boston University, College of Engineering

**Boston, MA**

Master of Science, Electrical Engineering; GPA 4.0

Attended Fall 2017 (Leave of Absence)