

Tony J Huang

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SKILLS

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

Backend: • Ruby on Rails • ExpressJS • SQL • PostgreSQL • MongoDB • Rspec • Jest • Heroku

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 with hand gestures.

(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 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](#)

Clone of Instagram, a photo sharing social networking platform.

(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.
- Built reusable React components in combination with Redux for post show and posts index.

Bored No More

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

Activity prescription app for the bored based on user's preferences.

(MongoDB, ExpressJS, ReactJS, Redux, NodeJS, Yelp API, TicketMaster API)

- Created backend API endpoint to reroute Yelp API calls to prevent CORS (Cross-origin resource sharing).
- Formalized code to create Axios request to Yelp and TicketMaster API based on application requirements.

EXPERIENCE

Liberty Mutual Insurance

Boston, MA

Analyst - Modeling, Data Science

Jul 2016 - Aug 2017

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

Business Analytics Development Program, Analyst Associate II

Jun 2014 - May 2016

- Learned VBA to code an Excel tool for data gathering and analysis to aid decision making.
- Developed workforce capacity model for evaluating task-based staffing using multivariate linear regression.
- Improved predictive model performance by coding Excel user-defined functions to scrape data from web APIs.

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)