

# Joe Xiao

## Software Developer

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**SKILLS** Ruby, Ruby on Rails, JavaScript, React.js, Node.js, Express.js, Redux, jQuery, SQL, PostgreSQL, Mongoose, MongoDB, Git, Heroku, HTML5, CSS3, Amazon Web Services (AWS S3), Webpack

## EDUCATION

**App Academy** - An immersive, 1000+ hours software development course with focus on full-stack web development with < 3% acceptance rate (Winter 2020)

**Brooklyn College** - BS - Computer Science (Spring 2019)

Relevant Coursework: Object-Oriented Programming, Operating Systems, Databases, Algorithms, Data Structures, Computer Architecture

## PROJECTS

**Aniflix** (Ruby on Rails, React, Redux, AWS S3, PostgreSQL, Jbuilder, HTML, CSS)

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

*a full-stack single-paged Netflix clone where users can watch an assortment of popular animes! Watch anywhere, anytime!*

- Designed and formatted to remotely store and host videos on the cloud via AWS S3 and efficiently retrieves and loads video data only when the user hovers for a video preview, which reduces website load time by more than 50%, and reduces S3 data costs by over 75%.
- Implemented a frontend search, which uses O(1) lookup and write-time of Objects, which effectively generates a list of videos to be rendered, without having to query the database or retrieve from S3.
- Leveraged Rails polymorphic associations for movies' types and genres linked from S3 database to allow for modular and DRY coding patterns, which includes organizing by genres and show types.

**FishyDex** (MongoDB, Express.js, React.js, Node.js, AWS S3, Google Maps API)

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

*a crowdsourced social media platform about fish for fishers, where users can post pictures of fish they caught.*

- Incorporated AWS S3 into MongoDB and Express configuration, exposing media-object associations that allow users to post pictures to different types of components, such as user albums, fish display, and information pages.
- Utilized Google Maps API and React to create an interactive map with different piers and pinned local fishing spots using React to link each pinned location to its respective informational page.
- Effectively utilized Git conventions for version control between team members throughout the development and deployment cycle to allow for easy and organized collaboration between team members.

**Tower Defense JS** (JavaScript, HTML, CSS3)

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

*An interactive grid-based Tower Defense game where users can place turrets to defend against the oncoming waves.*

- Assigned each section of the canvas into a grid which is then mapped into an Object hash that includes x/y coordinates and contents. This is used to assign turrets, dictate enemy paths, and determine the distance between turrets and enemies, allowing for calculations to deal appropriate damage to enemies based on relative distance.
- Constructed modular classes for both turrets and enemies allowing for easy incorporation into future updates based on providing new parameters to each class' exposed API in the outer game class.
- Managed light-weight local storage of the user's high score by instantiating custom cookies on the document object, which can be read and updated with each instance, challenging the user to best themselves on each subsequent use

## EXPERIENCE

**Programming and Robotics (Lead Instructor)**

*Apex for Youth*, Jan 2016 - July 2019

- Oversaw and maintained a safe learning environment by paying attention to details and preventing and resolving problems as soon as they are detected.
- Structured daily lesson plans to most effectively pique student interests, using technologies such as Scratch and Lego Mindstorms, which produced a participation increase of 25% from historically less participatory students.
- Collaborated with other instructors and developed different ways of improving student participation and involvement, such as attending positive reinforcement and behavioral analysis lectures.