SUJIN PARK

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SKILLS

JavaScript, React, Redux, Ruby, Rails, HTML5, CSS3/Sass, Canvas, REST, MongoDB, RSpec, Node.js, Express.js, SQL, PostgreSQL, jQuery, Git

PROJECTS

Ghiblify | *(React/Redux, Rails 5, AWS S3, HTML5, CSS3, Sass)*   **live** | **github**
Full stack music web application inspired by Spotify for Studio Ghibli fans
- Created music player using HTML5 audio and React, to provide users with uninterrupted audio streaming during navigation.
- Utilized custom event listeners in combination with the Redux cycle to dynamically sync play-pause toggling, song skipping and seeking across entire application.
- Built higher order component to provide consistent, built-in loading functionality for all other components, creating a user friendly interface by reducing perceived page loading time.
- Configured JSON response using JBuilder to ensure data was formatted similarly to redux global state, cutting down size of reducers by 50%.

ByeBugger | *(MongoDB, Express, React/Redux, Node.js, three.js, WebGL, HTML Canvas)*   **live** | **github**
3D first person shooter game themed in a retro, 8-bit style
- Developed collision detection algorithm using line-intersection logic to detect collision between bug and bullet sprite objects.
- Generated unique game map using binary space partitioning to yield 2D array of 1s and 0s, which eventually were rendered as three-dimensional walls and empty spaces using three.js.
- Utilized three.js and WebGL to apply environment textures and create bug sprite objects that always face the player to create the illusion of a 3D bug object.

Flapper (Winter Edition) | *(HTML Canvas, Google Speech Recognition API, HTML5, CSS3)*   **live** | **github**
Web game where the player helps Flapper navigate the winter terrain with keyboard or voice commands
- Implemented voice controls by utilizing Google's Speech Recognition API to create my own VoiceControl class that allows players to control Flappy Bird with verbal commands.
- Customized axis-aligned bounding boxes algorithm to detect collision between two game entities.

WORK EXPERIENCE

Treatment Manager/Dental Assistant
Urban Pacific Dental Associates   Jun 2016 - Sept 2017
- Outlined treatment timelines for approximately 10 patients each week and corresponded with each patient, his/her insurance company and our dentist to come up with a financially feasible treatment option while also ensuring optimal oral health.
- Assisted dentist on various dental procedures, including root canals, tooth extractions, resin-composite fillings, and crowns, and earned dentist's trust by taking detailed notes and coming in over weekends to practice.

Research Assistant
Longaker/Wu Lab, Stanford   Jan 2011 - Jun 2015
- Derived vessel progenitor cells from induced Pluripotent Stem Cells (iPSCs) and adipose tissue.
- Helped discover peptides that prolong cell survival post-transplantation to ensure cell implantation and growth.
- List of Publications:
    - "Prolonged survival of transplanted stem cells after ischaemic injury via the slow release of pro-survival peptides from a collagen matrix," *Nature Biomedical Engineering*, Feb. 2018.
    - "External Beam Radiation Therapy for the Treatment of Human Pluripotent Stem Cell-Derived Teratomas," *Stem Cells*, Aug. 2017.
    - "Clonal precursor of bone, cartilage, and hematopoietic niche stromal cells," *PNAS*, July 2013.

EDUCATION

Stanford University *School of Humanities and Sciences*   Aug 2018
- B.S. in Biology

App Academy   Winter 2018
- Immersive 1,000-hour full-stack web development course with <3% acceptance rate