BRIAN LAI

DEVELOPER

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SKILLS

Development

C#
Java
C/C++
Python
Ruby
Swift
Kotlin
TypeScript
JavaScript
CSS
HTML
PHP

Applications

Unity
Rider
IntelliJ IDEA
CLion
WebStorm
RubyMine
Visual Studio
Visual Studio Code
Unreal Engine
DataGrip
NetBeans
ProCreate
Sketch
Figma
Affinity Photo
Affinity Designer
Affinity Publisher
Adobe Photoshop
Blender

Frameworks

NodeJS
Angular
React
Blazor
MySQL
MongoDB
Zenject
Selenium
Discord API

Services

Git / GitHub
Amazon Web Services
Google Cloud Platform
Microsoft Azure

Other

English
Vietnamese
Japanese
Art (drawing)

EDUCATION

Computer Science, BS
San Francisco State University
August 2016 - May 2020
3.53 GPA

SELECTED PROJECTS

Turn-based JRPG
In development

Working on a single-player Japanese-style role-playing game in Unity with cross-platform input support and data serialization for saving and loading. This project uses the Zenject framework for dependency injection to maintain cleaner code. Features RPG systems like inventory, crafting, quests, 4-character party, world map, saving and loading, etc. Graphics are powered by Unity's new Universal Render Pipeline with custom shaders such as toon-style.

Infection FPS
May 2020

Created a multiplayer first-person shooter game in Unity using the Mirror Networking API in a team of six programmers and two audio leads. Weapon system includes firing, reloading, switching, and aiming. New weapons can be picked up from the ground. Infected players are equipped with a melee weapon.

Self-Driving Car Pi
May 2020

Worked in a team of four to build and develop an autonomous self-driving robot car. The robot is powered by a Raspberry Pi using various motors and sensors to navigate an obstacle course. The sensors help the robot follow a black line and avoid obstacles within a certain distance.

Mecha Fighter VR
December 2019

Created a multiplayer VR fighting game in Unity using SteamVR SDK in a team of five. Combat system features gesture-based ability system and velocity-based hit detection. Networking is implemented using a custom server written in Java.

RPG Sandbox
September 2019

Developed top-down click to move and attack core combat system for RPG game in Unity using the NavMesh pathfinding system. Features core RPG elements like equipment, character stats, enemy AI, map navigation with portals, and more. Created high-fidelity shaders using Unity Shader Graph and Universal Render Pipeline.

BaySpace
August 2019

Worked on front-end, back-end, and Git management for a team of 8 as the GitHub admin. Our team exercised the software development process which includes iterative deployment, scrum meetings, and test-driven development. The web app is written in NodeJS and Bootstrap, uses MySQL database, and deployed on AWS using the Express framework. Users can submit posts, upload images, search posts, view map of locations, and register and sign-in.

Bomberman
May 2019

Developed a 4-player bomberman game in Java. Bombs use a simple algorithm to calculate explosion distances in 4 directions. The map is a tile-based grid is randomly generated. Custom maps can be created then loaded from file. Collisions are used for kicking bombs and solid interactions.

Tank Game
April 2019

Developed a 2-player top-down shooter tank game in Java that includes a collision detection system using the Visitor Pattern. Features include health UI, powerups, destructible walls, custom maps, and more.

Shell
March 2019

Built a shell command-line interface in C that features common shell commands like cd, ls, etc. The shell can start from any shell client and it uses semaphores and mutex locks for various functions such as pipes.