

BRIAN LAI

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EDUCATION

San Francisco State University – San Francisco, CA

August 2016 – May 2020

Bachelor of Science in Computer Science

- **Coursework:** Data Structures, Discrete Mathematics, Machine Structures, Web Software Development, Programming Methodology, Operating Systems, Analysis of Algorithms, Programming Languages, Software Engineering, HCI, Multiplayer Game Development, UNIX Embedded Systems, Linear Algebra
- **GPA:** 3.53

SKILLS

Coding Languages	C#, Java, C++, Python, HTML, CSS, JavaScript, TypeScript, SQL, Swift, Ruby, PHP, Assembly
Technologies	ASP.NET Core, Blazor, Razor, Maven, Gradle, Angular, NodeJS, ReactJS, VueJS, Selenium
Tools	Linux, JetBrains, Visual Studio, Unity, Godot, Xcode, Bootstrap, AWS, GCP, Azure, Docker
Spoken Languages	English, Vietnamese, Japanese

EXPERIENCE

Teaching Assistant – Department of Computer Science, San Francisco

August 2019 – May 2020

- TA for CSC 256: Machine Structures, graded bi-weekly MIPS assignments and exams for 60+ students. Provided assignment assistance by answering questions and clarifying instructions.

SELECTED PROJECTS

Asuka.Net Discord Bot

February 2021

- Developed a Discord bot in C# with the .NET 5 framework using the Discord.Net library and Dependency Injection.
- Implemented relational database access with Entity Framework Core and MySQL provider.
- Wrote NUnit tests, build, and deployment scripts that run as part of the CI/CD process with Docker containers.
- Configured database migrations with Flyway to keep both development and production environments in sync.

Infection FPS Game

May 2020

- Worked in a team of 8 to create a multiplayer first-person shooter game in Unity C#.
- Wrote and edited game design document to serve as a living blueprint for the development cycle of the game.
- Implemented multiplayer lobby and gameplay functionality using Mirror High-Level Networking API.

Self-Driving Car Robot

May 2020

- Worked in a team of 4 to build an autonomous self-driving robot car with Raspberry Pi.
- Built multithreaded functionality to power and drive the robot in C using various sensors and interfaces.

BaySpace Image Posting Web App

August 2019

- Worked in a team of 8 as the GitHub manager to build a full-stack web CRUD application.
- Wrote and edited project documentation that lists requirements, milestones, and functionality for the application.
- Built the server with RESTful API using NodeJS, ExpressJS, Amazon Web Services, and MySQL database backend.
- Built account registration system with password encryption and authentication for uploading images.
- Built admin page with basic CRUD capabilities to modify database entries submitted by users.

Games – Bomberman and Tanks

May 2019

- Designed two structured interactive games using Java 11 Swing GUI toolkit for two or more players.
- Developed fast collision detection system that runs every frame using the Visitor design pattern.
- Developed unique algorithms to calculate 4-direction bomb explosions based on nearby collisions.
- Wrote instructional documentation to teach users how to play, also includes class diagrams and explanations.