XIAOLONG DONG

Los Angeles, CA | +1 (508) 981-8634| dongxiao@usc.edu|https://www.linkedin.com/in/xiaolong-dong-368139220/

EDUCATION

University of Southern California - GPA: 3.75/4.0	**Jan 2022 - May 2024**
Bachelor of Science in Computer Science	
University of Virginia - GPA: 3.5/4.0	**Aug 2021 - Dec 2021**
Bachelor of Science in Computer Science	

Skill

Programming Languages	Java, C++, C#, Python, x86, HTML, CSS, JavaScript, PHP, SQL, HLSL, Cg
Framework and Database	Vue, Mysql, BootStrap
Game Engines and Tools	Unreal, Unity, SDL, Maya

Awards

HackPku 2022	Fifth place, Best Visual Design	**May 2022**
MechMania 28	Fourth place	**October 2022**

Projects (GitHub Repo: *https://github.com/RodDong* , Itch.Io repo: *https://rod233.itch.io/*)

Sliding Eight Puzzle Solver (C++, DFS)   **December 2021**
- Created a 2D vector topological graph to process the 8 Puzzle game and find the best solution
- Implemented a checking algorithm to check whether the 8 puzzle is solvable
- Implemented DFS and a distance comparison helper function to find the fastest solution
- Utilized the DFS algorithm to improve the program efficiency by about 300% compared to the Brute Force solution

Star Fox Tunnel (C++, SDL, GameDev)   **October 2022**
- Implemented 3D "endless flying" gameplay of the famous game Star Fox Tunnel using SDL
- Deployed third-person camera movement and character movements such as "barrel roll"
- Programmed collision components for characters in the game and obstacles using AABB collision detection
- Coordinate character animations and sound effects using the tools provided by SDL Library

Metroidvania GameJam Project (Unity2D, C#, Finite State Machine, Git)   **August 2022**
- Created a Metroidvania Game with a team of 5 people within a month
- Utilized Unity 2d and C# to create a Third Person Metroidvania Game.
- Used GitHub for version control and team collaboration
- Built a simple AI for enemy Ai and movements by implementing a Finite State Machine for each enemy
- Developed algorithms for calculating the projectile paths inside the game
- Established Level Saving and Loading Mechanisms by storing information in a JSON File

MechMania Project (Java, Finite State Machine, DFS)   **October 2022**
- Initiated a simple AI with a team of four for bots to combat in a game with other bots created by different teams
- Proposed a Finite State Machine to determine the decisions of movements
- Utilized the DFS to traverse through the PathNodes in the map to calculate the danger level on each tile to avoid danger
- Introduced an algorithm to determine the bot's choice of purchasing an item based on the types of bots in the field

GamOff Project (Unity2D, C#, Git, Product Management. LeaderShip)   **December 2022**
- Led a team of 15 people to deliver a 2d RPG game within a month.
- Collaborated with a group of 4 programmers on the team to design the gameplay mechanics
- Worked with artists to design and implement the backpack system, card duel interface, and game object interaction interface
- Worked with the narrators to develop the rough storyline and give feedback to the dialogues they compose
- Utilized Ink to build a customizable dialogue system, which helped writers to customize the storyline
- Used Finite State Machine to implement the AI of the enemies in card duels and the core game loop during the card duel

Personal Website (Html, CSS, Vue, BootStrap, Javascript, PHP, MySql)   **December 2022**
- Designed and programmed the front and backend of my Personal Website
- Deployed the backend of the website registration using PHP and Mysql using the CRUD in the SQL server
- Coded the index page and my project showcase using Html, CSS, and Vue
- Made the website responsive using Bootstrap and Flex

Grandma Green (Unity, UIToolkit, C#, Perforce, Usability)(https://linktr.ee/grandmagreen)   **January 2023**
- Worked as a Usability Engineer Volunteer with a team of 40 to make a Farming Simulator Game
- Utilized UI Toolkit and its modules to implement the Responsive UI design and finalized details with the artists
- Collaborated with Graphics Engineers on the team to implement Color Blind Mode
- Learnt and Used Perforce as a Version Control Tool during Game Development