RUIDI HUANG

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Email ◇ LinkedIn ◇ Github ◇ Portfolio

EDUCATION

Master of Computer Science, GPA: 3.75 / 4.0 — 2022 - Expected 2024
Northeastern University Vancouver, BC, Canada
Relevant Coursework: Building Game Engines, Programming Design Paradigms, Algorithms

Bachelor of Computer Science, GPA: 3.59 / 4.0 — 2017 - 2021
Colorado School of Mines, CO, United States
Relevant Coursework: Game Development, Computer Graphics, Software Engineering, Data Structure

SKILLS

Programming Languages: C++, Java, Python, SQL, C# ,HTML, Sass, JavaScript
Tools : Git, Visual Studio Code, Visual Studio, Unreal Engine 5, Unity, MySQL Workbench

WORK EXPERIENCE

Ansys — Aug 2023 - Present
Software Development Intern — Remote — San Jose, California

- Help maintain and improve **Python** program that uses **Pyspark** and **Pandas** to pre-process and clean user data from Ansys Electronics Desktop on **Azure Databricks**.
- Optimize and improved program driver and executor memory usage when processing large amount of collected user data by tuning **Java Virtual Machine**'s Garbage Collection configurations, allowing the spark program to run for longer time and process more data at once with less driver memory needed.

PROJECTS

2D Game Engine — Apr 2023 - May 2023
Course project for building a 2D game engine using C++ and SDL2: https://ruidih.github.io/

- Completed the game graphics rendering functions using the **SDL2(Simple DirectMeida Layer)** library and integrated game physics with **Box2D** library in **C++**. Designed game resource manager in singleton pattern.
- Exported C++ functions that are wrapped with **Pybind11** which can be imported and implemented in Python scripts for the purpose of saving time from compiling **C++** files.
- Implemented engine **GUI** using the **Tkinter** library in Python. Saving game level data locally in **JSON** format to achieve **data-oriented design**.

3D UE5 Top Down Shooting Game — Jun 2023 - Current
Independent Unreal Engine 5 group game project aiming to learn UE5

- Implemented player movement using **Input Action** and **Enhanced Input**.
- Applied **GAS (Game Ability System)** to apply game play effects on players when they collided with items.
- Populating level floor with 2D colored tile grid that updates their material color based on Team score on each tile in C, visually displaying player's progress as they interact with the game floor.

Unity 2.5D Shooter Game — Feb 2023
2023 Global Game Jam Vancouver 48-hour Unity project: https://globalgamejam.org/2023/games/sleepless-night-5

- Crafted, tested, and deployed **C#** scripts for control of player movement and overall weapon attacking logic.
- Attached player shooting, attacking, and moving actions with audio to augment player interactions. Included UI and in-game ambient sound to aid on building a immersive gaming environment.
- Successfully accomplished the game with a well-coordinated workflow in a 14-member team. Regulated complex project version control using **Git**.