Ruohan Huang

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RELEVANT SKILLS

- **Programming languages:** Java, Javascript, C, C++, ASM, Python
- **Tools:** Unreal Engine 4, Blender
- Strong debugging, problem-solving and critical thinking skills developed through coursework
- Ability to work in a fast paced and team-based environment

EDUCATION

University of California, Davis, CA *Expected Graduation June 2025*

Bachelor of Computer Science

- **GPA:** 3.9/4.0
- **Relevant Coursework:** Data Structures and Algorithms, Object-Oriented Programming, Algorithm Design, Discrete Math, Linear Algebra, Computer Graphics, Operating System, Machine Learning, Gameplay Programming, Parallel Architectures
- **Honors & Awards:** Mark & Margaret Garibaldi STEM/Arts Award

EXPERIENCE

Undergraduate Research Assistant - Purdue University *June 2023 – August 2023*

- Developed skills with Jupyter Notebook to employ various machine learning models for predicting energy consumption in buildings.
- Utilized Gated Recurrent Unit (GRU), Long Short Term Memory (LSTM), and Recurrent Neural Network (RNN) architectures for accurate time series prediction.
- Conducted hyperparameter tuning to enhance model performance and optimize predictive accuracy.
- Gained hands-on experience in implementing machine learning pipelines and contributing to projects.

PROJECTS

3D Graphics *Course Project* *September 2023 – December 2023*

- Utilized WebGL, JavaScript, and shaders to render interactive 3D objects from OBJ files.
- Implemented an arcball camera and rotation of parent and child objects.
- Incorporated Phong shading, Gouraud shading, shadow mapping, texture mapping, and mipmapping.

Robot Game *Personal Project* *June 2024 – November 2024*

- Developed a basic wave survival game in Unreal Engine, featuring AI enemies and player character controls
- Created and rigged a 3D character model for the player, including animations for run, idle, attack, and rolling
- Handle game mechanics such as spawn logic, enemy waves, health system, and score tracking
- Created game UI such as health bars, score counters, and wave indicators

Stealth Game *Personal Project* *November 2024 – December 2024*

- Designed a stealth-based game in Unreal Engine where the player avoids detection from patrolling guards and uses a distraction mechanic to move past obstacles
- Implemented game logic using C++ including guard vision cone detection and reaction to distractions
- Created Guard state to indicate their level of alertness

Roguelike Final Project *Course Project* *November 2024 – December 2024*

- Collaborated with a team to design and develop a roguelike game in Godot, incorporating key principles of game feel.
- Integrated multiple weapon types and power-ups to enhance gameplay variety.
- Created procedurally generated maps to ensure a dynamic, endless gaming experience.
- Learn to understand preexisting code and build on top of the work of other programmers