Ivan Ho

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PROJECTS		

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Gameplay and Systems Programmer | **Waves** **Sept 2022 – Present**

A tactical naval ship simulator set on an alien ocean planet.
- Designed and coded new real-time gameplay mechanics with interactive elements for easy accessibility to their properties to improve the efficiency of testing, number tweaking, and balancing.
- Optimized back-end systems and existing features to improve software performance and reduce memory usage.

Project Manager and Puzzle Developer | **Legup** **May 2022 – Present**

An open-source software where students can create, edit, and solve logic puzzles for various logic courses at Rensselaer Polytechnic Institute.
- Programmed and tested new logic puzzles (i.e. Battleship, Minesweeper) using a newly implemented code structure and various unit tests to reinforce logic correctness for each rule in each puzzle.
- Managed a small development team via reviewing open-source contributions (i.e. pull requests) and providing guidelines, documentation, and a project plan for the related codebase.

Project Manager and Systems/UI Programmer | **Astral Chart** **Jan 2022 – May 2022**

An open-world space combat video game with customizable weapons, multiple storylines, and a vast solar system. Awarded for Biggest Dreamer at the annual Rensselaer GameFest 2022.
- Established and built multiple systems, custom data structures, and interfaces to reduce workflow and streamline adding new objects to user interfaces.
- Managed project progress and milestones. Facilitated team meetings and members' progression updated for effective communications. Drove the project's progress and completion according to a timeline.

EXPERIENCE

Quality Engineer Intern | **Dassault Systèmes** | Waltham, Massachusetts **Sept 2022 – Dec 2022**
- Designed and implemented new methods to test the performance and reliability of new and existing features for existing software.
- Revised existing testing programs to support multithreading, allowing for tests to run in parallel and greatly reducing the wait times for tests to run on extremely large databases.

Programming Instructor | **Juni Learning** | Remote **Jun 2021 – Aug 2022**
- Held virtual 1-on-1 lessons with five high school students on a weekly basis on various programming languages such as C#, C++, and Scratch.
- Taught courses on coding fundamentals such as formatting code, data structures, writing algorithms, and object-oriented programming. Assigned and graded supplemental programming projects for students.

Team Manager and Head Moderator | **Glacial Esports** | Remote **Mar 2020 – Jun 2021**
- Managed multiple teams by holding routine group and 1-on-1 meetings with team members and staff.
- Facilitated and simplified events scheduling and information sharing among multiple teams.
- Moderated community and private messaging group chats, posting routine reminders of upcoming events and practice sessions, and integrating server bots to automatically filter out spam or inappropriate postings.

Programmer and 2D/3D Artist | **National High School Game Academy** **Jun 2019 – Aug 2019**
Carnegie Mellon Pre-College
- Studied various game development fundamentals such as game programming, 2D/3D art and animation, storytelling, sound design, and game design with graduate students and professors of respective fields.
- Worked in teams to pitch, build, and present two game projects: one based on a remastered retro game, and another based on an original idea.

EDUCATION

Rensselaer Polytechnic Institute (RPI) | *Troy, New York* **Dec 2023**
B.S. in Computer Science & B.S. in Games and Simulation Arts and Sciences | **GPA**: 3.69

SKILLS		COURSEWORK	
- C/C++/C#	- Ubuntu	- Data Structures & Algorithms	- Discrete Mathematics
- Java	- Unity	- Operating Systems	- Linear Algebra
- Python	- Unreal Engine 4	- Computer Architecture	- Differential Equations
- SQL		- Artificial Intelligence I	- Game Design & Development