

## Ivan Ho

[ivanh322@gmail.com](mailto:ivanh322@gmail.com)

[linkedin.com/in/hoi3](https://www.linkedin.com/in/hoi3)

[corppet.github.io/portfolio](https://corppet.github.io/portfolio)

[github.com/corppet](https://github.com/corppet)

### PROJECTS

*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, Tree Tents) 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) or providing guidelines, documentation, and a project plan for the related codebase.

*Machine Learning Developer* | [Stepmania Agents](#)

Mar 2023 – Apr 2023

**A machine learning experiment focused on training agents to play a popular rhythm game.**

- Designed various learning environments of increasing difficulties for multiple learning agents to train in.
- Developed multiple machine learning agents utilizing various learning algorithms and weights to learn and play Stepmania.

*Front-End Developer* | [Flight Tracker](#)

Jan 2023 – Apr 2023

**A tool to visualize and filter publicly available flight information.**

- Designed and implemented the user interface of the application and an intuitive API to communicate to the back-end to gather and visualize flight data based on inputted filter parameters.
- Created multiple autonomous workflows to validate any changes made to the application and to ensure the new code maintains the established code style for easy readability.

*Gameplay and Systems Programmer* | [Waves](#)

Sep 2022 – Apr 2023

**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.

### EXPERIENCE

*Quality Engineer Intern* | **Dassault Systèmes** | Waltham, Massachusetts

Sep 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.

### 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: 3.72**

#### SKILLS

- C/C++/C#
- Java
- Python
- HTML/JS/CSS
- Unix
- Unity
- Unreal Engine

#### COURSEWORK

- Data Structures & Algorithms
- Operating Systems
- Computer Architecture
- Artificial Intelligence I
- Discrete Mathematics
- Linear Algebra
- Game Design & Development
- Machine Learning from Data