**Bryan Chiu**

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**EDUCATION**

**Master of Science in Computer Science** Sep 2021-Present

*Northeastern University*

* GPA: 3.94
* Major Courses: Data Structures, Object-Oriented Design, Algorithms, Artificial Intelligence and Machine Learning, Software Development, Web Development

**Bachelor of Science in Electrical Engineering** Sep 2017-June 2021

*South China Normal University*

* GPA: 87%
* Related Courses: Matlab, C, Computer Networking

**TECHNICAL KNOWLEDGE**

* Languages: Python, Java, C++, C, Javascript, HTML, CSS, Bash
* Tools: Git, Node.js, Express, MongoDB, React, Expo, Gym, PyTorch

**EXPERIENCE**

**Ansys Software Development Intern**  Jan 2023-Apr 2023

* Ansys Maxwell software development and testing with PyTest and Ezmerge on Windows and Linux.
* Reviewed previous pull requests and reported errors and solutions at weekly team meetings.
* Proactively built a Linux Virtual Machine in order to run test software in both Windows and Linux OS to identify and diagnose potential code issues in test software.
* Participated in a company hackathon, which involved competing in LeetCode problem-solving and analyzing machine learning programs to identify performance improvements.

**AI Class Teaching Assistant**  Sep 2022-Dec 2022

* Explained Artificial Intelligence concepts to students and answered questions from students.
* Helped students create their own solutions to solve AI problems and marked their assignments.

**PROJECTS**

**Hangman Game**  Nov 2021-Dec 2021

* Designed a Hangman game in Java using the MVC architecture and Object-Oriented Programming.
* Implemented multiple interfaces and classes, including a game model, a controller, and a GUI viewer.
* Wrote JUnit tests for the game model class to test its functionality.

**Pac-Man AI Agent** Jan 2022-Apr 2022

* Applied A\* search and Minimax algorithm with Alpha-Beta pruning to a Pac-Man agent that can find the shortest path to eat all the dots while avoiding being caught by the ghosts.
* Implemented reinforcement learning algorithms to train the Pac-Man agent in Python.

**NRC Turing Mobile Game** Feb 2022-May 2022

* Developed a mobile machine translation test game for the Multilingual Text Processing team from National Research Council by using React Native in a team project.
* Converted the data provided by NRC to JSON files and randomly displayed the human vs. machine translations. Matched the correct answers and stored players’ selections for NRC to evaluate the results.

[**Game Library Website**](https://nenepis24.onrender.com/) Sep 2022-Dec 2022

* Developed a game library website with a frontend client and a backend server in a group project.
* Employed Express for the server which can fetch data from the Steam API and our own database.
* Created multiple pages and components including home, game details, and user profile using React.js and Auth0 for the client and connected to the server to achieve CRUD operations.

[**Reinforcement**](https://nenepis24.onrender.com/) **Learning Research**  Jan 2023-Present

* Reviewed research paper and discussed with supervisors about a novel method to solve power management and allocation problems in optical networks.
* Created optical network environments with Python, Gym, PyTorch and GNPy and implemented a Q-learning agent to train the power allocation agent.