Colin Hwang

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EDUCATION

The Cooper Union, NY, NY
Bachelor of Engineering, Electrical Engineering, Projected May 2024
Cumulative GPA: 3.50; **Computer Science GPA:** 4.0
Relevant Courses: Data Structures and Algorithms, Artificial Intelligence, Computer Architecture, Natural Language Processing, Frequentist Machine Learning, Operating Systems, Databases.

PROJECTS & ACTIVITIES

Sentiment Analysis on Game Reviews, Natural Language Processing April 2022-May 2022

- Utilized Python and Keras, TensorFlow's deep learning API, to develop a neural network with the task of predicting game reviews. The neural network was trained and tested using a dataset consisting of approximately 5,000 game reviews from GameStop's website.
- Experimented with various models and hyperparameters to arrive at an architecture consisting of an embedding layer that received one-hot vectors as input, two fully connected recurrent neural networks as hidden layers, and a dense layer with SoftMax activation as the output layer. The model achieved an accuracy of 93.81%.

Neural Network, Artificial Intelligence November 2021-December 2021

- Developed a program that allows for the testing and training of a neural network consisting of one hidden layer.
- The program prompts the user for a set of parameters, such as the number of epochs, a learning rate, and a training file, that will determine how well the neural network learns.
- Training is done with back-propagation, and an output file with several metrics will display how well the trained neural network performs on a testing file.

Checkers AI, Artificial Intelligence September 2021-November 2021

- Implemented a game playing program in C++ that plays checkers against the user with the capability to win against an above average player.
- Combines iterative deepening, minimax search with alpha beta pruning, and a heuristic function to search the game space for ideal moves.

Board Member, The Cooper Union's IEEE September 2020-Present

- Helped organize, plan, and run events catered toward those interested in the electrical engineering field.

WORK EXPERIENCE

TA, The Cooper Union's Saturday STEM Program October 2021-Present

- Enabled students to develop familiarity with extended reality and aided students with developing skills in engineering design, computer aided design, and web-based programming
- Assisted student teams in developing multiple projects, digital portfolios, and final presentations involving using CAD, HTML, and JavaScript to prototype and develop enhancements to in game objects.

Software Engineering Intern, Applause May 2022-August 2022

- Refined and tested an algorithm essential for the development for the next generation of VR devices.
- Worked in a fast-paced environment and collaborated with colleagues to ensure deliverables were met to standard and presented to clients in an efficient and timely manner.

SKILLS

- C++, Java, Python, HTML, CSS, JavaScript, React, Matlab, Microsoft Office, CAD.