Stanton Zeng

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Education

University of California, Riverside **Riverside, CA**
Bachelor of Science in Physics, Concentration in Computer Science, *Expected Graduation: June 2022*

University of California, Riverside **Riverside, CA**
Masters in Computer Science, *Expected Graduation: June 2023*
Coursework (Physics): Classical Mechanics, Electricity and Magnetism, Thermal Statistics
Coursework (CS): Software Construction (Scrum, Waterfall, Agile...), Discrete Mathematics, Intermediate Data Structures and Algorithms
Programming Languages: C++, Python, Java, HTML, CSS, Javascript

Work Experience

University of California, Riverside - Bird Labs **Riverside, CA**
Undergraduate Researcher *September 2020 - Current*
- Joined a data science centered research group where I am analyzing hundreds of different cosmological simulations
- Implemented a script in python that improved the extraction time of specific data points from output files
- Utilizing simple statistical analysis techniques to measure said extracted data points

Projects

Star, Galaxy, and Asteroid Detection **San Diego, CA**
Lawrence Livermore National Laboratory *August 2021 - September 2021*
- Worked in a team of 4 and built a neural network tailored to finding and classifying objects from astronomy data
- Implemented a Convolutional Neural Network(CNN) to do binary classification between stars and galaxies
- Designed and applied false positive asteroid data to help train our network to learn more confidently

ASL translator **San Diego, CA**
https://github.com/stantonzeng/sign-langauge-translator *July 2021 - August 2021*
- Developed and trained a CNN using deep learning to recognize sign language gestures
- Used a combination of python, Tensorflow, and Keras for model building, while using openCV for hand recognition
- Achieved a training accuracy of .92 with a validation accuracy of .85

Chess **San Diego, CA**
https://github.com/stantonzeng/solo-chess *June 2021 - July 2021*
- Built the game of chess from scratch using C++ so that I could practice and play offline on my own computer
- Replicated most of the major functionalities(checking, castling, pinning, etc) and bug tested the software rigorously
- Utilized Object Oriented Programming techniques and design patterns to contain the complexity of the code

Text-Based RPG **Riverside, CA**
https://github.com/stantonzeng/RYZ *March 2021 - June 2021*
- Collaborated in a group of 3 to build a text-based RPG through C++ and vim
- Worked on unit testing and documentation using tools such as github, valgrind, makefiles, and googletest

Aerospace Systems **Riverside, CA**
Project Member *September 2019 - Current*
- Proposed and outlined the early stages of the payload project "Sonic Bloom"
- Designed to be an effective solution to enviornmentally significant areas negatively affected by natural disasters
- Worked with a team of 6 to engineer the design of the launcher and how it will interact with our rocket