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*

Honors: Dean's List (Winter, Spring, Fall 2020)
Related Coursework (Physics): Classical Mechanics, Electricity and Magnetism, Thermal Statistics
Related Coursework (CS): Software Construction (Scrum, Waterfall, Agile...), Discrete Mathematics, Intermediate Data Structures and Algorithms, Machine Learning
Programming Languages: C++, Python(matplotlib, pandas, seaborn), MySQL, R, Java, LC-3, Unity, Git

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

Raincross Boxing Academy — **Riverside, CA**
Tutor — *June 2020 - August 2020*

- Worked as a tutor for a nonprofit organization to assist ∼20 high school students in need of academic help
- Gave lectures and individual tutoring specifically on math, physics, and computer science

Projects

Chess
https://github.com/stantonzeng/solo-chess

- 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 as a final project
- Created the different character objects, their unique fighting styles, and their interactions with other characters to promote a more dynamic enviornment
- Designed using the scrum development method
- Worked on an extensive amount of 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", where we launch seed bombs within a wide range from our rocket
- 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
- Now working on pure optimization of our system as well as the launcher's arduino software