STANTON ZENG

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PROJECTS

TeamBalancer.com
github.com/stantonzeng/elo-balancer2

- Deployed a full-stack web application using AWS Amplify and Google Cloud
- Algorithmically generates balanced teams organized through the use of sets and binary trees
- Created a REST api using Java Springboot that interfaces into Postgresql to store player information
- Used React and Node.js to create a user friendly front end that calls the REST api

American Sign Language translator
github.com/stantonzeng/sign-langauge-translator

- Utilized Tensorflow and Keras to build a CNN tailored to recognizing the sign language alphabet
- Used OpenCV to design and create my own custom dataset of ∼30,000 images to train my model with
- Achieved a model accuracy of 92% and a validation accuracy of 85%

Chess Clone
github.com/stantonzeng/solo-chess

- Reproduced Chess using C++ and object oriented design patterns to reduce code complexity
- Added inherited classes and functions that calculates the state of the game (Capturing, Checks, etc.)
- Utilized the SFML library to create a graphical user interface of a standard chess board

Text-Based RPG
github.com/stantonzeng/RYZ/tree/main/final-project-ryz-master

- Collaborated in a group of 3 to design a text-based RPG built through C++
- Worked extensively on unit testing using tools such as valgrind, makefiles, and googletest
- Followed the scrum framework, performed regular stand up, sprints, and implemented User stories

EXPERIENCE

University of California, Riverside - Bird Labs *September 2020 - December 2021*
Undergraduate Research Student

- Worked with a post-doc to use the MP-Gadget library for parameter tuning in cosmological simulations
- Utilized Matplotlib and Seaborn to develop python scripts that analyzed and monitored the simulations

Lawrence Livermore National Laboratory *August 2021 - September 2021*
Data Science Intern

- Used the Pytorch framework to construct a CNN for satellite image classification
- Validated and tested the CNN on datasets of ∼34,000 images with injected satellite figures
- Helped transition our model to fit the R-CNN algorithm to achieve a high validation accuracy of 97%

EDUCATION

University of California, Riverside (GPA: 3.6/4.0) *September 2018 - June 2022*
Bachelor of Science in Physics, Minor in Computer Science

SKILLS

Languages: C++, Java, Python, Javascript, HTML & CSS
Software: Git, AWS, Google Cloud, Maven, Tensorflow, Pytorch, OpenCV, Springboot, React, Node.js