Scarlett He

2024 Summer Intern

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Education

OREGON STATE UNIVERSITY   July 2023 – Dec 2024

BACHELOR OF COMPUTER SCIENCE

Key Courses: Data Structures, Web Development, Intro to Computer Science, Discrete Structures in Computer Science

UNIVERSITY OF CALIFORNIA DAVIS   Sep 2018 – Sep 2021

BACHELOR OF SCIENCE IN ANIMAL SCIENCE, SPECIALIZED IN COMPANION ANIMAL

Experience

Yamaha Music School, Piano Teacher   Fremont, CA   Jun 2021 – now

- Maintained a web portfolio which gives students easy access to class materials and facilitates remote learning
- Designed a course scheduling web application which automated class booking by matching availability and preference
- Accommodated students' multi-level time preferences for their respective teacher with ranking factor and **Greedy** algorithm
- Stored teachers' availability and students' preference by implementing data persistence layer in **MySQL**

Girls Who Code @ Unity Technologies, Work Prep Intern   Remote, CA   May 2022 – May 2022

- Managed intern tutorials and projects with **GIT** version control while hosting in **GitHub**
- Completed Procedure Programming, Function, File I/O, Data Structure, Object-Oriented Programming tutorials in **Python**

Projects

Chess Variant Game   Summer 2023

- A chess program with customized game rules which showcases proficiency in object-oriented programming and problem-solving concepts
- Handled unique move eligibility rules for chess piece classes (King, Rook, Bishop, Knight) seamlessly by Inheritance from base Piece class
- Implemented robust move validation logic and tested with scenarios considering piece ownership, move eligibility, and king safety
- Root-caused King safety check failure by stepping into the logic via PyCharm debugger

Customer Sentiment Analysis in Reviews   June 2022

- Abstracted patterns by decomposing problem into synonyms searching and occurrence counting subproblems
- Created flowchart to go into depth and detail implementation of the solution
- Implemented Python program which labels customer reviews with sentiment tags

Applied Statistics in Agricultural Science   Fall 2018

- Learned statistic concepts including linear and non-linear data model, analysis of variance by analyzing lab dataset in R
- Performed test of independence between olive plant cultivar type and the number of seeds produced per olive fruit in R
- Studied the relationship between a predictor, explanatory, independent variable, and dependent variable in linear regression