PHOEBE LIANG

CONTACT

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in phoebeliang98

EDUCATION

University of Michigan Ann Arbor Fall 2018 - Present

B.S. Computer Science 2022
3.85 GPA

SKILLS

TECHNOLOGY	LANGUAGE
C++	English
Python	Mandarin
HTML/CSS	Cantonese

COURSES

Elementary Programming Concepts
Discrete Math
Programming and Introductory Data Structures
Data Structures and Algorithms
Introduction to Computer Organization
Foundations of Computer Science

AWARDS

NetScout Dec. 2018
"Elementary Programming Concepts" Showcase Grand Prize

- created a simple elevator controlling game in **C++**
- designed and implemented an **AI** algorithm to maximize final score on elevator game
- chosen as **grand prize winner out of 70+ teams**

EXPERIENCE

Google Sunnyvale, USA
STEP Intern May 2020 - Aug. 2020

Aqumon Hong Kong
Algo Intern (Quantitative Team) July 2019 - Aug. 2019

- implemented flexible symbol converter for conversion between various trading symbol formats
- scripted data validation program for verification of **1000+** trading data files
- installed and configured **Spark** on **Hadoop YARN** cluster
- wrote and tested various data retrieval and processing scripts using **Pyspark** to analyze large data files (several GBs)

PROJECTS

Elevators Dec. 2018

- a game where the user controls three elevators in a building, trying to pick up as many people as possible
- features an **AI** program that plays the elevator game to **maximize points** earned
- AI uses complex logic and tiebreakers to optimize elevator function within the restrictions of the provided data
- **grand prize winner** of 2018 Elementary Programming Concepts Showcase – awarded by Netscout

Computer Vision Feb. 2019

- a program that uses smart seam carving according to mathematical formulas to dynamically resize a given image
- used pointers for memory preservation along with dynamic memory

Euchre Feb. 2019

- a fully functional complex Euchre program
- includes options for users to play against other users or the computer
- program dynamically chooses cards depending on the choices of the other players

Forum Post Classifier Apr. 2019

- a program that categorized forum posts based on computed probabilities using machine learning principles
- computed probabilities based on given data input then assigned category predictions

Treasure Hunt Sept. 2019

- a program that reads a "map" from a text file and finds a direct path to the treasure from the starting location
- map includes locations such as start, treasure, land, and water

Zombie Invasion Oct. 2019

- a program to run a zombie invasion simulation based on an input text file
- input text file includes data for the generation of new zombies for each new round
- each round, the simulated player shoots zombies until either quiver is empty, there are no more zombies, or the player is dead
- program then efficiently calculates and prints statistics, including median time alive for zombies

Log Manager Nov. 2019

- implement a hash table system to store log files
- data structure allows for a number of different searches to be performed on stored log files: timestamp, keyword and category

Pairing Heap Oct. 2019

- implement a pairing heap ADT featuring all required functions

Pokemon Dec. 2019

- design algorithm to find minimal spanning trees and optimal traveling salesman problem tour given a series of input vertices

ACTIVITIES

Michigan Hackers · *Logistics, iOS Developer* Sept. 2018 - Present

- managed communications to club members and analyzed attendance demographics to keep track of interest
- engineered solutions to meet club member needs based on attendance data and member interest
- demonstrated passion and commitment to become an official Core member for a top campus CS organization in terms of company recognition, event activity, social media presence
- programmed an **Alexa skill** using **Javascript** to control RGB lights using a Particle Photon device
- coordinated with the iOS Development student team along with the Android Development team to develop a cohesive app using **Swift, Firebase, UIKit, Figma, and Cocoapods**
- implemented a functional main screen with camera access using **AVFoundation**, customized to the design of the app