Marcus Chong

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Experience

Triway Education // Computer Science Instructor   *July 2021 - August 2021*

- Taught lessons on algorithms covering topics like graph theory, dynamic programming, and ad-hoc problem solving strategies using Java

- Based lessons around creative application of simple techniques before moving to harder content

Sugar Labs // Open source contributor (Google Code-in)   *December 2019 - January 2020*

- Completed 2 months of open-source development with Sugar Labs on educational One Laptop Per Child software

- Wrote a feature to parse user-created music notation and export to MusicXML in JavaScript

- Packaged 2 GTK apps with Flatpak for cross-platform functionality amongst all Linux distros

- Implemented the card game Rack-O in PyGame and Python GTK bindings (link)

Awards and Honours

Canadian Computing Olympiad (University of Waterloo) // Bronze medallist   *May 2021*

- Placed 36th/2920 in the senior division of the Canadian Computing Competition, earning invite to the Canadian Computing Olympiad (link)

- Solved informatics problems involving topics like graph theory, data structures, and number theory using C++

Google Code-in // Runner-up (Sugar Labs)   *January 2020*

- Amongst top 120 of 3560 students around the world recognized for quality open source work (link)

European Summer Program in Rationality (University of Oxford) // Student   *August 2021*

- 10 day "Applied Rationality" summer program (link)

- Topics included probability/statistics, philosophy, cognitive science, debate, effective altruism, and more

Hack the Hammer // 2nd place of 39 teams   *December 2019*

- IoT device for smart environmental data collection with web app for analytics (link)

- Implemented a React.js data view synced with Firebase that sent SMS alerts

Projects

Chomp (Github repository)

- Chomp is a two-player game played on a 2D grid in which players take turns removing squares. Removing a square also removes all squares to the right and below it. The object of the game is to not take the top left square

- In this web implementation, the user plays against an algorithm which computes its optimal strategy using dynamic programming

Snake (Github repository)

- Clone of the classic Snake game built with node.js and p5.js

- Additional features include real-time multiplayer play and customizing your snake

Skills

- Python, JavaScript (incl. React, Node), Git/Github, HTML/CSS, C++, Java, Data structures/algorithms

Education

The Woodlands Secondary School   *September 2019 - July 2023 (expected)*

- Computer science club executive (manages lessons, contests, etc), grew club from ~20 to 50+