ANDREW TONG

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📍 Ontario, Canada

SKILLS

LANGUAGES:
Python, C, C++, SQL, HTML, Verilog
OTHER: Git, Jira, HEVC

EDUCATION

University of Toronto   Sept. 2018 to May 2024
BASc Computer Engineering

RELEVANT COURSES

Multimedia Systems, Algorithms & Data Structures, Programming Fundamentals

EMPLOYMENT

NETINT TECHNOLOGIES INC.   Markham, Canada
Co-op Video Codec Engineer   Aug. 2021 to Aug. 2022

Modified H265 source code in C++ to implement experimental encoding algorithms
Optimized video simulation and quality report scripts in Python to run 60% faster than original
Resolved issues via Jira regarding irregularities in video encoding quality and video codec analysis

PROJECTS

RIICHI MAHJONG DISCORD BOT   Sept. 2022 to Current

Based on the Japanese edition of the board game Mahjong. This is an interactive Discord bot that can simulate a 4 player game of Riichi mahjong, where players compete to create the fastest and most valuable hands.
Technologies used: Python

BLACKJACK   May 2020 to June 2020

Designed the backend of a Blackjack simulation, utilizing the Deck of Cards API, resulting a in fully functional game simulation. There are settings that allow the user to customize payout multipliers for the optimal experience.
Technologies used: Python, Flask

PROTOTYPE GPS   Jan. 2020 to Apr. 2020

Worked with a group of 4 members to design a functional prototype GPS application. This application produces the most optimal path from one place to another given a database of nodes, backend based on the A* pathfinding algorithm. Heuristic resulted in an average of 15% decrease in E.T.A compared to Dijkstra's.
Technologies used: C++

ACTIVITIES

UNIVERSITY OF TORONTO ROBOTICS ASSOCIATION   Sept. 2018 to Jan. 2019

Contributed to development of a Sumo bot, using C++ as the framework and CAD for modelling
Placed 1st in the 2018-2019 UTRA Sumo competition