David Loi

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SKILLS

Languages: Python, C, Java, Racket, HTML, CSS, JavaScript
Technologies: Android SDK, React, XML, JSON, numpy, pandas, pip, Distance Matrix API, Microsoft Office applications

PROJECTS

TICTACTOE APP   (https://github.com/DavidLoi/TicTacToe)
- Simple TicTacToe game that also keeps track of how many times each player won.
- Interface was built with **Android SDK** and **XML**, **Java** was used to handle all logic and updating scores.

PATH PLANNING APP   (https://github.com/DavidLoi/Path-Planner)
- Route optimization app that takes in a starting, ending and additional locations along the way and produces the order of locations to visit with the shortest travel time.
- Interface was built using **Kivy**, the **Google Distance Matrix API** provided the travel times in **JSON** format which was then optimized in **Python**.

STOCK PRICE PROBABILITY SIMULATION   (https://github.com/DavidLoi/Monte-Carlo-Stock-Simulation)
- Takes in a stock's price history and using probability theory produces a distribution graph of prices after a configurable number of days.
- Built using **Python**, data was gathered with **pandas** and then manipulated with various functions from **numpy** and **scipy**, and the graphs were plotted using **matplotlib**.

IMDB WEBCRAWLER   (https://github.com/DavidLoi/IMDB-WebCrawler)
- Parses through top rated movies on IMDB and gathers various data which is then exported to an excel spreadsheet.
- Built using **Python**, **BeautifulSoup** was used to scrape the data from each webpage, finally the data was exported to the excel spreadsheet with **xlwt**.

EXPERIENCES

CFM Case Competition – *University of Waterloo*   October 2020 – October 2020
- Devised a solution to help the University of Waterloo become a leader in online learning with appropriate analyses of the business environment.
- Cooperated with teammates to design and present a PowerPoint presentation to the panel of judges.

Lifeguard/Swim Instructor – *City of Brampton*   September 2019 – March 2020
- Monitored 20+ patrons and the pool environment for safety violations and took steps to prevent further accidents.
- Taught classes of 4-6 students, documented their progress and gave constructive feedback.
- Communicated with parents and patrons to ensure a good experience for them and their families.

AWARDS

Canadian Open Mathematics Challenge   2019
- Scored in the 4th quartile.

Canadian Computing Competition   2019
- Scored in the 63rd percentile.

Euclid Contest   2019
- Scored in the 60th percentile.

EDUCATION

University of Waterloo   2020 – 2025
Computing and Financial Management   *Waterloo, On*
- President's Scholarship of Distinction Recipient.