# King Lai Computer Science Student

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### **Education**

#### Honours Bachelor of Science, Computer Science

#### University of Toronto Scarborough

Fall 2019 to Summer 2020 Dean's List - 3.78/4.00 CGPA 2019 - present

## **Experiences**

#### **Physics Club Treasurer**

AY Jackson Secondary School

09/2018 - 06/2019

- Managed the Physics Club finances including total expenses, revenue, profit, and budget by communicating with club memebers about needs and wants.
- Determined how to effectively spend club budget for large scale events given a constraint on time and budget.

#### **Table Tennis Team Captain**

AY Jackson Secondary School

04/2017 - 05/2018

- Brought team performance to gold standards by coaching team members and bringing a positive atmosphere.
- Communicated with the coach about team strategies, tactics, and performance.
- Encouraged and lead the team to persevere through challenging and critical matches.

#### **Volunteer at Recreation Center**

Vantage Recreation Center

07/2018 - 08/2018

- Managed a private condominium recreation center by signing residents into a logbook, guide residents to the swimming pool and unlock the door, cleaned exercise equipment, and booked desired facilities for residents.
- Maintained the swimming pool by checking the clarity of water and monitoring the acidity of water at regularly timed intervals.

#### **Awards and Achievements**

Toronto Team Table Tennis City Champion 2017, 2018, 2019

Junior and Senior Jazz Ensemble (Soloist) 09/2017 - 05/2019

Royal Conservatory of Music Gr.8 Piano Certification First Class Honours with Distinction 2015

## **Tools & Technologies**



## **Projects**

#### **Puzzle - Minecraft Server Manager**

05/2020 - 10/2020

- A server manager for the game, Minecraft. Its purpose is to start, stop, backup, restore and maintain the server.
- It performs the backups by copying and pushing the Minecraft world files into a Subversion repository hosted on a Raspberry Pi 4.
- It will only store a determined number of backups on the repository, deleting the oldest backup to make space for the new one, which saves over 10TB of storage each month.
- Written in Bash on the Linux Terminal using Vim, featuring a user-friendly menu for easy server management.

#### Minesweeper Game and Engine

10/2020 - present

- Developing an engine to solve the classic game, Minewsweeper, by recognizing patterns and marking guaranteed mine locations.
- Created test cases and a board rollback GUI to trace code, view algorithm inaccuracies, and debug the project.
- Written in Python and utilizes the Pygame library.
- Designed and created the graphics using Adobe Photoshop.

## **Fortnite Analytics** (fortniteanalytics.web.app) 12/2020

- Created a web app to display Fortnite statistics of a given player with React and hosted it using Google Firebase.
- Coded a simple Springboot Microservice in Java to implement RESTful API endpoints which send Fortnite player data in a JSON body and deployed it with Heroku.
- Designed a clean and user-friendly layout to easily search and view player information.