

## 1B SOFTWARE ENGINEERING · UNIVERSITY OF WATERLOO

Skills\_

Languages Java, Python, C, C++, HTML, CSS (Proficient); Kotlin, JavaScript, Bash, SQL (Familiar) Frameworks/Tools Git, Tkinter, Swing, MySQL, Flask

# Projects \_\_

WEBSITE C Jan. 2021 to Present

- Constructed personal website with **HTML**, **CSS** and **JavaScript** and deployed to GitHub Pages.
- Created a menu with animations using CSS and JavaScript.

ANTI-RONA LOCK SYSTEM 🗗

Oct. to Dec. 2020

- Integrated our software components using both object-oriented programming and functional programming in Python.
- Designed and implemented a **graphical user interface** using **Tkinter**.
- · Communicated effectively with everyone, allowing integration and completion of the project one week before the deadline.
- Debugged my teammate's code, a key part of our project, successfully.
- Derived and implemented the mathematical formulae for distance calculations in Python.

CHESS 🖸 May to June 2019

- Built Chess from scratch with Java and object-oriented programming principles.
- Created a complete graphical user interface with movement animations using Java's Swing toolkit.
- Implemented undo/redo, saving/loading, and additional features.

GAMES 🖸 June to Sept. 2020

- Implemented Ultimate tic-tac-toe using Java and Checkers, Connect Four and Tetris using C++
- Applied object-oriented programming principles.
- Implemented algorithms for move/input validation, "Game over" checks, et cetera.

### Experience \_\_\_\_\_

#### Kumon Educational Japan Co. Ltd.

Cambridge ON, Canada

GRADER/TUTOR

2017 to 2018

• Graded thousands of student worksheets and guided many puzzled students.

#### Awards

UWATERLOO PRESIDENT'S SCHOLARSHIP OF DISTINCTION

2020

• 95+ admission average

AP SCHOLAR WITH DISTINCTION

2020

• Scored 5/5 on all AP exams

CAYLEY (MATH) CONTEST SCHOOL CHAMPION

2018

• Top 1% of 24,709 contestants

#### **Education**

### University of Waterloo

Waterloo ON, Canada

96.64 Cumulative GPA

CANDIDATE FOR BACHELOR OF SOFTWARE ENGINEERING Sept. 2020 to Apr. 2025

DAVID XU · RÉSUMÉ FEBRUARY 16, 2021