

David Xu

SOFTWARE ENGINEERING · UNIVERSITY OF WATERLOO

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Education

University of Waterloo

BACHELOR OF SOFTWARE ENGINEERING

- Finished first year; Cumulative **GPA: 97**

Waterloo ON, Canada

Sept. 2020 to Apr. 2025

Skills

Languages JavaScript, Python, CSS, HTML, SQL, C, C++, Java

Frameworks/Tools React, Node.js, Git, PostgreSQL, Heroku, Flask

Projects

ANTI-RONA LOCK SYSTEM

Oct. to Dec. 2020

- Integrated computer vision and machine learning software using **Python**.
- Derived and implemented the **algorithms** for distance computation in Python.
- Designed and implemented a **graphical user interface** using **Tkinter**.
- Communicated effectively with everyone in the team to coordinate the project.

CHESS

May to June 2019

- Developed original move validation **algorithms**, checkmate logic, et cetera.
- Built from scratch with **Java** and **object-oriented programming** principles.
- Created a complete **graphical user interface** with movement animations using Java's **Swing** toolkit.

WEBSITE

Jan. 2021 to Present

- Implemented a theme switcher using **CSS** and **JavaScript**.
- Constructed from scratch and deployed to **GitHub Pages**.

BUG TRACKER

Mar. 2021 to Present

- Developed a bug tracker in **Python** using the **Flask** framework and deployed to **Heroku**.
- Used **PostgreSQL** to manage the database and **SQLAlchemy** to query it.

Awards

DEAN'S HONOURS LIST

2021

- High GPA and ranking

UWATERLOO PRESIDENT'S SCHOLARSHIP OF DISTINCTION

2020

- 95+ admission average

AP SCHOLAR WITH DISTINCTION

2020

- 5/5 on all AP exams

CAYLEY (MATH) CONTEST SCHOOL CHAMPION

2018

- Top 1% of 24,709 contestants