

# CHRIS HALE

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2B, Honors Co-operative Program  
B.S. Computer Science  
University of Waterloo ID#:20845382

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Github:  
<https://github.com/Chris-He01>

## SUMMARY OF QUALIFICATION

- Proficient in JavaScript/TypeScript, C/C++, algorithms and Object-Oriented Design
- work experience in frontend development with HTML, PHP, MySQL, CSS, JavaScript, Python, and C
- Familiar with Python, jQuery library, Sklearn, Pandas through side projects
- Confident in delivering high quality independent work and taking initiatives to acquire new skills

## PROFESSIONAL WORK EXPERIENCE

### Web Development Intern at DINGTECH

HTML, CSS, JavaScript, PHP, MySQL, layui admin

- Created the full stack of a business information storage system for the government about rural development to manage client files, and for clients to create accounts, retrieve passwords and view their files upon login.
- Developed a PHP program to manage a SQL client database to automate the file filling and printing process.  
(with SQL sever management studio, and IIS)
- Built interactive front-end web pages and created backend of aforementioned systems with PHP

### Embedded Engineer Intern at ASSA ABLOY-----Singapore (Remotely)

X++, SQL server, Visual Studio

- Participate and build an embedded application on AX system for new product order system facing to customer.
- Developed X++ program that automate the process of updating information between AX system to SQL server.
- Successfully researched user experience and simplified the system structure by working with marketing and sales personnel

## Personal Projects

### STRAIGHT CARDS GAME

C++, Xwindow, UML

*A multiple-players competitive, graphical Cards' game composed of 2 suite of cards, special trigger events and computer players*

- Applied observer pattern between the block and cell class, and cell and view class to reflect graphic changes
- Program Structure designed based on factory and template design patterns and single responsibility principle
- Implemented Polymorphism with pure virtual Level and Block classes and dynamic dispatch at runtime

## Additional Experience

### ARTIFICIAL INTELLIGENCE STUDY

D\_Tech Education

- Researched and generated highly correlated features using TensorFlow, PyTorch, Sklearn, Pandas, etc. to build, train, and optimize efficient machine learning models using various machine learning techniques including CNN, RNN, GAN, VAE, etc.
- Explored basic principles of reinforcement learning and deep learning.

## Education

**Candidate for Bachelor of Mathematics, Honours Mathematics, University of Waterloo**

**Waterloo, ON, September 2019-Present**

**University of Waterloo**

Major Average: GPA of 3.9

- **Relevant Coursework:** Object-Oriented Software Development, Data Structure and Management, Database Management, Element Algorithm Design and Data Abstraction, Operating System, Computer Organization and Design