

Evan Li

I like (very!) contemporary jazz piano, video games and photography

 hc3li@edu.uwaterloo.ca

 in/hanchen-li/

 evanli.me

 [@EvanLi1999](https://github.com/EvanLi1999)

Skills

Languages: C++, C, SQL, Java, JavaScript, Scala, Python, MATLAB, Scheme

Tools: Boost, LAMP, Redis, BigTable, Git, Linux

Experience

Core Software Developer / IBM Canada Varicent / Toronto, ON

May-Aug 2018

- Implemented API Keys for **REST API (C#)** and **Web App (JavaScript)**
- Developed Federated Access controls to automatically configure new user account settings based on organization login privileges
- Designed a dashboard to schedule and display automatic model backups
- Designed and implemented individual model access controls (e.g. certain user roles, or users connected through SSH, IP whitelisting)
- Improved **SAML** protocol to enforce audience and lifespan assertions of IDP responses

Behavioural Team Member / WATonomous / Waterloo, ON

Sep-Dec 2018

- Designed and implemented localized obstacle map to avoid object collisions using C++
- Developed waypoint processor to plan vehicle path to find waypoints on a map

Projects

Somewhat-Blue / Chess AI / Python (Tensorflow), C++, EC2

Jun-Aug 2018

- Implemented AlphaZero's Self-Play learning algorithm
- Trained a **Convolutional Neural Net** to evaluate board positions in order to suggest the moves that should be evaluated using **Monte-Carlo Tree Search**
- Reduced tree search time by **54%** using **Alpha-Beta pruning**

VM / Vim Clone / C++

Nov 2018

- Supports most of Vim's core features (e.g. motions, search, macros, repeat commands)
- Implemented **MVC pattern** to control input/output, state logic used **visitor pattern**

Scala!? / Scala Subset Compiler / Scala

Sep-Dec 2018

- Compiler for a typed subset of **Scala** to **MIPS assembly**
- Implemented **Lexer/Parser (CYK)**, **type safety** and **garbage collector (Cheney)**
- Features include **lexical scoping**, **closures** and **tail call** optimization

Kaggle (@evanli1999) / Data Analysis / Python

Dec 2016

- Analysis of datasets such as breast cancer prediction or credit card fraud detection
- Participated in the *Microsoft Malware Prediction* competition using LightGBM to predict which devices were more likely to be infected by malware

Education

University of Waterloo

Bachelors of Computer Science, Honours, Co-op, 2022