

Jae Hoon (Antonio) Kim

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Computer Science 2A
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TECHNICAL SKILLS

Languages: Java, Python, SQL, C, C++, Bash, Groovy, HTML, CSS, JavaScript

Tools Used: Java EE, TensorFlow, Grails, Git, Subversion, Oracle DB, Tomcat Server

WORK EXPERIENCE

Enterprise Software Developer · Canadian Blood Services · Summer 2017

- Monitored national enterprise systems and database performance.
- Analyzed system problems and debugged application and database errors.
- Utilized **Java EE** and **Grails** to develop new web based solutions in collaboration with IT business systems analysts and Custom Solutions' national enterprise clients.
- Worked with other software development team members using agile software development methodologies while working on various projects.

Lifeguard and Swim/Lifesaving Instructor · Town of Richmond Hill · Fall 2014 – Summer 2016

- Applied communication skills whilst working in a team of Lifeguards to keep the pool deck safe.

RELEVANT PROJECTS

Atari Reinforcement Learning AI (Hack the North 2017)

- Designed and fully implemented a Deep Reinforcement Learning model using **TensorFlow**.
 - The model uses a combination of **Q-learning** and a **Convolutional Neural Network** to take the raw pixel data from the screen to learn the game mechanics of any Atari game.
 - The model used the bellman function to approximate the reward and then fed this backwards through the fully connected layer and two convolutional layers of the CNN.
- Optimized with TensorFlow's Adam Delta Optimizer, the model was able to play [Space Invaders](#) 5-6 times better than random play.

Math Evaluation Library

- Created a library that features a over 100 Mathematical functions including applications in Arithmetic, Calculus, Linear Algebra, Graphing, and much more.
- Developed a [Calculator application](#) with an intuitive GUI that makes use of all of the features in the library.
 - Currently working to turn this into an Android application with plans to make it into an IOS application.

Encryption Library

- Created a library that features a polyalphabetic symmetric cipher that I designed which utilizes a unique private key constructed from one of 10^{501} possible randomly generated key stores.
- Developed a [Password Manager](#) application with an intuitive GUI that uses the library's encryption algorithm to securely store usernames, passwords and personal information.
 - Currently planning to turn this into a web application/browser extension so that it is more accessible.

EDUCATION

Bachelor of Computer Science · University of Waterloo, Waterloo, Ontario
Fall 2016 – Present

ADDITIONAL CERTIFICATIONS/QUALIFICATIONS

- Certificate, First Aid with CPR-C (Lifesaving Society, 2016)
- Language, Korean – Working Knowledge