

# DEREK HON | Curriculum Vitae

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•  GitHub

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•  Blog

## SUMMARY

Masters of Science graduate in Computational Intelligence. Worked with Genetic Programming and aspects of Computer Vision. Open to any opportunities with a preference to AI.

## EXPERIENCE

### SOFTWARE ENGINEER

05/2023 - Present

TD Canada Trust

Toronto, ON

Solutioned a script to be deployed only during emergency situations.

Solutioned errors which occurred during deployments.

Monitored and solutioned environmental problems in SIT, Pre-Prod, and PROD Environments.

Working on a local CI pipeline for Active Trader.

Utilized Jacoco to generate unit test coverage for the Active Trader project.

Modified existing test coverage on batch jobs by 30% and wrote new tests with 80% coverage.

Prototyped a rewrite for the trading API for Active Trader.

Worked on a resiliency project to increase resiliency and stability across platforms.

### GRADUATE TEACHING ASSISTANT

01/2021 - 08/2022

Brock University

St. Catharines, ON

Lab Demonstration: Demonstrate exercises to be completed and provide assistance.

Marker/Grader: Grade assignments, exams, and proctor exams.

Course coordinator: Communication liaison for the professor.

Help desk hours providing aid for all computer science courses.

### MASTER THESIS STUDENT

01/2021 - 02/2023

Brock University

St. Catharines, ON

Illumination techniques applied onto Genetic Programming to explore the novelty of diversity. [Thesis Link](#)

### FULL STACK DEVELOPER INTERN

01/2019 - 08/19

Tejo (Mirrabel Inc.)

Toronto, ON

Revamped web app's back-end and front-end along with the sign up process and up-selling features. Fixing bugs/QOL through testing and from customer feedback.

Improve work efficiency through SCSS and CSS scripts through SFTP to the server along with bash scripts as the access point.

### FREELANCE DEVELOPER

03/2019 - 03/19

DroneHub

Remote

Fixed React object references and JavaScript errors on the website.

### SOFTWARE DEVELOPER INTERN

01/2018 - 04/18

HubDoc

Toronto, ON

Developed scripts to parse numerous financial documents. Add graph generation for progress updates to the intranet with filters.

## SKILLS

#### PROGRAMMING LANGUAGE

Experienced: Java | Python | JavaScript

Familiar: SQL | C++ | PHP | Spring

Batch XML | Maven

#### FRAMEWORKS & TOOLS

Copilot | ECJ(23, 27) | OpenCV | Git | R Studio | Drupal

#### LIBRARIES

matplotlib | Tesseract | SLMLab

## PROJECTS

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### ECJ 27 MAP-ELITES (PROTOTYPE)

2021

Java

Implementing MAP-Elites (<https://arxiv.org/abs/1504.04909>) into Sean Luke's ECJ ver. 27 (<https://cs.gmu.edu/~eclab/projects/ecj/>). Once fully documented, and once the code has been brought up to personal satisfactory quality, it will be submitted in hopes of becoming an official package.

### RECURSIVE NEURAL NETWORK

2021

Java

A recursive neural network utilizing Super Smash Bros. Melee frame data as input to try and classify the characters based off of the moves utilized within the game which is obtained through the frame data.

### RECEIPT EXPENSE CALCULATOR

2018

Android Studio

Free Neural Network OCR to parse receipt data to track expenses with user correction option afterwards. The images will be stored as a bitmap to view at any point in time, and expenses from month-day and year-day will be calculated and shown.

## RESEARCH GROUPS

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### BIO-INSPIRED COMPUTATIONAL INTELLIGENCE GROUP (BICIG)

2021 - Present

BICIG is a research group residing in the Department of Computer Science at Brock University. [Group Link](#)