

DUNCAN CLARKE

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EDUCATION

QUEEN'S UNIVERSITY

Kingston ON | 2017 - Present

Bachelor of Computing (Hons.)

Specialization in Cognitive Science

Dean's Honour List:

2017-18, 2018-19, 2019-20

GPA: 3.77

SKILLS AND TECHNOLOGIES

Proficient with:

Python • Java • HTML • CSS • JavaScript

Familiar with:

SQL • PHP • TensorFlow • PyTorch • Haskell • Prolog

PROJECTS

Computer Vision Sudoku Solver | 2020

- Reads photograph of Sudoku puzzle using computer vision techniques
- Recognizes puzzle structure and digits using MNIST dataset and PyTorch
- Solves puzzle with backtracking algorithm

Custom New Tab Page | 2019

- Local HTML file using CSS and JavaScript to create a stylized new tab page for the browser
- Contains links to most used websites
- Displays updated date, time, and local weather

2-Player Games – Reinforcement Learning | 2020

- Iteratively computes optimal policies for 2-player games using every-visit update and policy iteration
- Prisoner's Dilemma, Matching Pennies, RPS

n-Queens – Artificial Intelligence | 2019

- A Python implementation of Sosis-Gu QS4 Algorithm to solve the n-Queens problem
- Based around min-conflicts heuristic and iterative repair

WORK EXPERIENCE

SCIENCEQUEST

Instructor | Summer 2020

- Worked remotely, creating digital STEM-based lessons for children aged 6-13
- Created original coding activities with Python, Java, HTML, CSS and JavaScript
- Filmed and edited weekly instructional videos

VANDERMEER NURSERY

Head of Farmer's Market | Summer 2019

- Promoted from cashier/merchandiser
- Organized and stocked fruit and vegetables to be sold, working in a team
- Tracked sales to replenish stock accordingly and communicated information to superiors
- Prioritized tasks and delegated work to colleagues

TUTORBRIGHT

Tutor | Summer 2018

- Prepared lesson plans catered to the student's abilities and goals
- Worked through the material with students in an engaging manner to ensure comprehension
- Communicated progress and future plans with parents

COURSEWORK

- Data Structures
- Algorithms
- Database Management Systems
- Linear Algebra
- Discrete Mathematics for Computing I/II
- Computer Architecture
- Human-Computer Interaction
- Artificial Intelligence
- Neural and Genetic Cognitive Models
- Reinforcement Learning