# Mostafa Mahmoud

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# **Education**

# UNIVERSITY OF ALBERTA| BSc. Specialization in Computer Science

- · Expected completion in May 2024
- Courses: File and Database Management, Algorithms and Data Structures, Formal Systems & Mathematical Logic, Visual Recognition, Information Retrieval, Object-oriented design, Machine Learning & Intelligent Systems

# Skills

- · Languages (Known): Python, Java, C, SQL, HTML, Julia
- · Languages (Learning): JavaScript (React, TypeScript), Swift, C++
- · Frameworks: PyTorch, Tensorflow, NumPy, NoSQL, MySQL, MongoDB, Git, Android Studios
- · Soft Skills: Quick and Eager Learner, Strong Communication, Efficient Time Management, Work well individually as well as a part of a synergetic team.

# **Experience**

# **Streaming Service Data Manager**

- · CMPUT 291 Database Management
- Created the backend of a streaming service allowing users to log-in and interact with the streaming service as well as editors being able to edit the items in the streaming service all while maintaining the database accordingly using SQL.

#### **Unsupervised Maze Escaper**

- CMPUT 366 Intelligent Systems
- Created an unsupervised learning system using the Q-learning algorithm to guide a character through a 2D maze using a reward system in which they must avoid hazardous spots as well as retrieve a key from a given coordinate and find the exit door.

#### MNIST/CIFAR-10 Image Recognition and Classification

- · CMPUT 328 Visual Recognition
- Created a supervised learning system using PyTorch and Tensorflow in which I implemented convolutional neural networks for image recognition and classification tasks using frameworks such as YOLOv5, and trained the models on MNIST, double MNIST, and CIFAR-10 datasets. Achieved high accuracies on the tasks.

# **Personal Projects**

### **Web Data Scraper**

· Created a program to scrape publicly available data (Price, size... etc.) from various classified sites to compare prices of different merchants using the Beautiful Soup library on Python.

#### **Asset Price Tracker**

 Incorporated API calls to several applications to gather prices of certain assets in real time to allow for the grouping of all owned assets into one service that will track the overall capital value of said assets and update values accordingly.