# **Abdullah Paracha**

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## Education

**B.Sc.** McGill University, Computer Science and Biology

2021 - 2026

• Coursework: Applied Machine Learning, Intro to Software Systems, Data Structures, Statistics, Linear Algebra

### Skills

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

Technologies: Flask, React, Git, Pandas, NumPy, Matplotlib, MATLAB, PyTorch, Scikit-learn, APIs, Heroku, Render

# Experience \_\_\_\_\_

### McGill Cricket Club (MCC), VP Events

Montreal, CA Sept 2024 - Present Planned an inter-university tournament with over 50 participants, and a cricket tour overseas for the McGill team.

#### Self-Employed, Mathematics Tutor

• Taught mathematics to a diverse age group, prioritized critical thinking and fun challenges.

Dubai, UAE May 2023 - August 2023

# Projects \_\_\_\_

### **Book Recommendation Site**

- Developed a personalized book recommendation system using a dataset of over 1.1 million ratings from 278,000 users and 271,000 books.
- Improved recommendation accuracy by 25% through optimized similarity calculations and data preprocessing.
- Deployed as a web app using Flask and Render, making it scalable and accessible online.

#### **Organ Classification**

- · Built a convolutional neural network (CNN) and MLP to classify medical images from the OrganAMNIST dataset, containing 58,830 images across 11 organ classes.
- Achieved a test accuracy of 88.02% by optimizing the model using PyTorch and data augmentation techniques.
- Tested different learning rates and layers to optimize model performance and improve classification accuracy for future applications

### **EDA and Regressions**

- Performed Exploratory Data Analysis on both the Infrared Thermography Temperature and CBC diabetes indicators dataset with over 1,000 instances to identify key correlations and optimize features.
- Improved Mean Squared Error (MSE) from 0.0613 to 0.0604 by implementing minibatch Stochastic Gradient Descent (SGD)
- Improved model performance with 86.24% test accuracy in the logistic regression model by optimizing model parameters and scaling techniques.

### **Interactive Portfolio Website**

- Designed and developed a portfolio website to showcase my projects and skills.
- Built using HTML, CSS, JavaScript, React, and ThreeJS with a focus on responsive design and user experience.

♠ Book-Recommendation

Organ-Classification

C EDA-Regressions

Portfolio-Site