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Gabriel Peralta

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EDUCATION

Bachelor of Computer Science, Honours Computer Science Co-op, Minor in Mathematics & Biology; GPA: 4.00 Sep 2019 - Present
University of Windsor, Windsor, ON

Artificial Intelligence Specialization

Awards: Co-op Rising Student Star Award, Alumni In-Course Scholarship, President's Honour Roll and Dean's List, Outstanding Scholars

Relevant Courses: Data Structures & Algorithms, Database Management Systems, Object-Oriented Programming Using Java, Systems Programming, Computer Networks, Operating Systems, Statistics, Artificial Intelligence Concepts, Deep Learning for Vision and NLP

SKILLS

Languages	Python, Java, C#, JavaScript, HTML, CSS, C/C++, SQLBash, R
Frameworks	Spring Boot, Apache KAFKA, .NET, ASP.NET, Django, Angular, React, PyTorch, Keras, NumPy, Pandas
Tools	Git, MS SQL Server, SQLite, Kubernetes, Docker

WORK EXPERIENCE

Software Developer Intern Jan 2022 — August 2022
Royal Bank of Canada Toronto, ON

- Implemented an integration and data mapping platform between legacy systems and Salesforce using **Java**, **Spring Boot**, **SQL**, and **Apache Kafka**
- Built an event listener to process client system business events
- Analyzed mapping requirements to integrate over 30 customer fields to Salesforce
- Managed and maintained APIs using Spring Boot, SQL Server Management Studio and Postman
- Conducted 80+ unit tests to increase test coverage across the team code base using JUnit and Mockito
- Tracked remote deployments on **Helios**, **Jenkins**, and **OpenShift**, and resolved deployment failures

Junior Software Developer May 2021 — Aug 2021
MiTek Canada Bradford, ON

- Migrated a monolithic app to cloud-hosted **microservices** using **ASP.NET Core**, **.NET** and **C#**
- Designed UI components using **Angular** in Typescript, connected to microservices APIs
- Delivered a final project presentation in front of company executives and employees with different levels of experience
- Devised unit tests for Angular components using Jasmine and Karma

Research Assistant Sep 2020 — Present
University of Windsor Windsor, ON

Deep Learning

- Learned about Python libraries dedicated to **Deep Learning** (HuggingFace, Fast.ai)
- Developed and experimented with a simple **memory mechanism** for CNN layers using PyTorch
- Constructed a forward selection mechanism to determine how much the next layer is involved in the forward computation

Computational Biology

- Investigated a variety of machine learning models and tools for **dimensionality reduction** and **clustering**
- Acquired knowledge of a scRNA-Sequencing pipeline by learning R and the Seurat package
- Presented bi-weekly reports on biological validation of relevant biomarkers

Machine Learning Fellow May 2022 — June 2022
AI4Good Lab Toronto, ON

- Selected as one of the 30 members of the Toronto Cohort to attend an intensive introductory bootcamp in machine learning
- Collaborated with a group of 6 to develop **EpiHealth**, a platform for predicting epileptic seizures from wearable data
- Conducted **data preprocessing** using **Pandas** and **Numpy** and trained and implemented an LSTM architecture using **Pytorch**
- Awarded Toronto Cohort's Accelerator Award for developing EpiHealth

PROJECTS

Semantic Segmentation Sep 2021 — Dec 2021

- Trained a Convolutional Neural Network to label different regions of an image and experimented with different hyper-parameters for semantic segmentation on the Cityscapes Image Pairs Dataset using PyTorch and NumPy

Snake AI Jan 2021 — Apr 2021

- Trained a Deep Q Network for Reinforcement Learning to play the Atari game "Snake" using the PyTorch and Pygame libraries in Python with a multilayer perceptron and a convolutional neural network