MAHMOUD ELSAFI ABDELHADI

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EDUCATION

University of British Columbia, Canada **2018 - 2023**

Bachelor of Applied Science – Electrical Engineering **Upper-level GPA:** 3.9 - Dean's Honor List

Relevant coursework: Data Structures and Algorithms, Computer Architecture, Cybersecurity, Machine Learning, Software Design

- UBC International Major Entrance Scholarship
  - *Awarded **a merit-based $96,000** scholarship for outstanding academic achievement and extracurricular contributions.*

TECHNICAL EXPERIENCE

Royal Bank of Canada (RBC) **September 2022 – September 2023**

Full Stack Engineer Coop | *Nuxt.js, SQL, Python, R, Docker, GraphQL, Dataiku, AKS, Openshift*

- designed and tuned comprehensive system architecture and web solutions that met the enterprise certification standards with minimal supervision.
- digitized and automated manual approval workflows by developing and implementing software components through an understanding of required process validations and approving authorities.
- led the cloud migration championship for the department by compiling useful strategies, solutioning obstacles identified and deploying best practices.
- supported the major risk assessment project by developing key risk indicators identified by the auditors and communicating with key stakeholders to optimize data sourcing.
- enhanced ETL efficiencies by introducing data quality checks, schema changes recognition which successfully provided early problem detection and reduced data loss by 90%.

Tutankhamun FC **May 2021 - August 2021**

Machine Learning Engineer Coop | *Python, Sklearn, Tensorflow, Pytorch, SQL*

- Collected in-game data & performed data-cleaning & feature engineering in Python to pinpoint prominent features.
- Implemented SVM, KNN, Random Forest and Logistic regression models to predict game outcomes with Sklearn.
- Evaluated models over real-time data; best model had a 63% Accuracy with 4.5% standard deviation over 10 games.

PROJECTS

Formula One Prediction Neural Network | *Python ,Sklearn, Pytorch*

- Extracted and organized data from Ergast API, F1 website, and Wikipedia using BeautifulSoup; engineered and optimized two neural networks with 2000-2019 data, incorporating a three-layer linear network with Softmax activation and dropout, alongside an MLPclassifier from Sklearn, using Weights and Biases API for hyper-parameter tuning and result visualization.
- Tested both models with data from 2020 and 2021 season; best model predicted 14/22 race winners for 2020 season and 11/17 race winners for 2021 season, with each race having 20 drivers.

Amazoom Automated Warehouse | *C#, SQL, HTML, CSS*

- Implemented a front-end GUI using CSHTML & SQL; functionality consists of a network of warehouses, shopping cart functionality, Administration portal, tiered authorization, and relational databases of carts, users, and items.
- Programmed multi-threaded backend using C#; Implemented automatic robot delivery system, anti-collision system & battery dis/charge simulation. Developed an algorithm to enhance truck delivery & restocking, warehouse mapping, and item placement by 50%.

SKILLS

Languages	Javascript/Typescript · Python · SQL · HTML · CSS · C · C# · C++ · GraphQL
Frameworks/Libraries	Vue · React · Node.js · TailwindCSS · NuxtJs · NextJS · Docker · Pytorch · Tensorflow
Tools/Environments/Systems	Git · AWS · JIRA · AKS · OpenShift · Dataiku · Agile Methodology