Ali Al Shammaa

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Experience

Gore Mutual Insurance · Analytical Data Scientist *May 2021 – Aug 2021*

- Automated the E2E delivery of market insights by using **SQL** for database querying, **Databricks (Pandas)** for **ETL** and **Power BI** to create the report. It featured Competitive Pricing Index, Loss Ratio and **3** other KPIs, effectively eliminating **1 week long** process of raw data analysis.
- Delivered **6** descriptive and historical reports for performance management, auditing and operational tracking by building data pipelines using **SQL** in **Azure** and **DAX**/**Power Query** for creating visual metrics (eg: churn analysis) on **Power BI**. Visuals included time control, hierarchal charts and matrices.
- Collaborated with the data science team to deliver value to the **business** through **strategic** insights, **analytics** and formulations during a transformative period for the business.

Game Pill · Devoted Python Developer *May 2020 – Nov 2020*

- Created **3** Social Media bots in **Python** with **Selenium** along with a GUI using **Tkinter**.

LiTrans Lab – Ryerson University · Research Assistant *Aug 2019 – Sep 2019*

- Enhanced the photorealism of a VR simulation to improve reaction accuracy of the experiment's subjects.

Projects

CNN From Scratch · Neural Net

- Built and Optimized CNN using **numpy only** featuring back-to-back convolutional layers, pooling layers and fully connected layers that learns using matrix-based **SGD** and **backpropagation**.
- Trained and achieved **90%** success rate on odd MNIST.

ANN From Scratch · Neural Net

- Built a fully connected ANN using **numpy only** that learns using matrix-based SGD and backpropagation and was able to achieve up to **96%** on MNIST within **10** epochs of training.

MNIST ANN/CIFAR-10 ANN , CNN · Neural Net

- Built multiple ANNs and CNNs using **Tenserflow** and **Keras**. Achieved **97%** on MNIST with ANN. Achieved, **53%** and **78%** on CIFAR-10 with ANN and CNN respectively.

Neural Networks Notes · Notes

- A collection of personal notes on the **mathematical and computational theory** behind different neural networks as well as training techniques that spans **20** pages.

ChessML · Chess Engine

- Implemented a Chess engine in JavaScript using a Minimax Algorithm enhanced with AlphaBeta pruning.

Skills

Languages: Python, SQL, R , C++, C, Javascript

Tools: Pandas, Numpy, Tenserflow, Keras, Apache Spark, Power BI, Git, Linux

Education

University of Waterloo · Bachelor of Computer Science *2020 – 2025*
Cumulative GPA : 4.00 ; Relevant Courses : Calculus III, Probability, Linear Algebra, object oriented progra

All Neural Network testing results are based on validation-based training