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## Summary

Experienced Data Science and Machine Learning Engineer with a focus on designing scalable models and pipelines. Proven track record of improving model accuracy, driving business impact, and leveraging advanced ML techniques such as Gradient Boosted Machines, CNNs, and Retrieval-Augmented Generation (RAG).

## Education

**University of Waterloo and Wilfrid Laurier University** Sep 2020 – Dec 2025

- Bachelors of Computer Science (BCS) / Bachelors of Business Administration (BBA) Double degree - 3.88/4.0 GPA

**Google Project Management: Professional Certificate** July 2023

- Focusses on traditional and Agile project management approaches (Coursera certification)

## Skills

**Languages:** Python (Pandas, Numpy, Pytorch, Scikit-Learn, Langchain, MLflow, Plotly, Matplotlib, etc.), SQL, C, C++, Bash, R

**Tools:** Git, AWS, GCP, Linux, Tableau, Salesforce, Excel, Jupyter, Docker, Hadoop, Spark, Kubernetes, Snowflake, Azure

**Models:** GBM, Regression, NN, CNN, GAN, VAE, Attention/Transformer, RAG, GMM, Kmeans, KNN, SVM, Time Series, Ensembles

**Soft Skills:** Strong Communicator, Organized, Fast Learner, Flexible, Creative, Problem Solver, Leader, Agile/Scrum, Project Management

**Hobbies:** Canoe Tripping, Hockey, Gym (casual powerlifting), Skiing, Acting, Sailing, Drumming

## Work Experience

**Capital One – Data Science Intern** Jan 2024 – May 2024

- Designed a Gradient Boosted Machine credit risk model with LightGBM, leveraging custom sampling strategies, SQL feature engineering, and hyperparameter tuning, resulting in a 2% accuracy boost and \$15 million in annual revenue.
- Streamlined and standardized a scalable model pipeline, enabling 8% faster refits and parallel training/scoring, reducing operational time and improving model efficiency utilizing tools from Sklearn, Polars.
- Conducted in-depth model diagnostics, interpretability, and performance analysis, identifying key drivers for risk assessment and expediting the risk approval process using MLflow, Sklearn, SHAP, etc.

**XCare – Machine Learning Engineer** Sep 2023 – Sep 2024

- Developed and integrated an API-driven medical chatbot into XCare's system, enabling patients to interact with x-ray data and receive personalized rehabilitation plans, increasing patient engagement by 22% and reducing recovery times.
- Integrated Retrieval-Augmented Generation (RAG) with Cohere models into a chatbot, developing XCare's RAG pipeline to provide 17% more medically accurate responses, improving patient query resolution speed and accuracy.

**LEVEL – Project Manager Intern** May 2023 – Jun 2023

- Organized and operated the beta testing of the LEVEL wearable medical sensors in physiotherapy clinics around Ontario.
- Managed shortened timelines and limited resources to achieve the study objective of trialing with 50 patients.
- Led end-to-end data analytics, data wrangling, a/b testing, exploratory data analysis, and data visualization - driving the next iteration of development and increasing clinical efficacy by 10%.
- Redesigned the product UI display, wireframing using Figma to incorporate testing feedback.

**Manulife – Data Science Intern** Jan 2022 – Apr 2022

- Optimized digital marketing targeting by developing customer segments using k-means clustering in Python and GCP, resulting in a 10% increase in marketing conversion rates.
- Engineered a robust data pipeline integrating internal and external sources with SQL.
- Performed in-depth data analysis of digital marketing content with Google Analytics and Google Data Studio, generating actionable insights that optimized ad performance, increasing click-through rates by 15%.

**Atolio, Inc – Client Development** May 2021 – Aug 2021

- Built a pre sales pipeline through personalized cold outreach to CXOs of enterprise companies, receiving over 40 responses.
- Partnered with co-founders to run dozens of discovery calls with CXO's from companies like Two Sigma, King, and Ring.
- Developed and implemented a propensity-to-buy model on Atolio's Salesforce instance using Python, increasing early access partnerships by 170% and streamlining customer acquisition strategies.

**Neuphysio - Program Developer** May 2020 - Jun 2020

- Designed and implemented a program to translate data from clinical to accounting software, saving 10 hours of data entry each month.
- Worked with stakeholders to set goals, deliverables, and requirements enabling smooth project timelines and clear scope.

## ***Volunteer and Other Experience***

**Camp Timberlane – Head Canoe Trip Leader** June 2019– August 2024

- Planned, packed, and led educational canoe trips for campers in Ontario provincial parks lasting 3 to 8 days.
- Motivated teams of up to 10 to work to their full potential and face challenges with a smile, leading to team growth and learning.
- Handled high pressure and high risk situations including a camper breaking their leg several days away from an access point, dealing calmly with pressure and creating a plan to safely evacuate the trip.

**180 Degrees Consulting – Volunteer Consultant** 01/2021 – 09/2021

- Consulted with teams of 5-7 for non-profit organizations, developing sustainability and market expansion business plans
- Communicated with clients to set and maintain goals, clear project scope, and manage scope creep

**United Way Elgin Middlesex – Canada Life Youth United Advisory Council Member** 2020

- Marketed and awarded grants of up to \$2000 to local youth to fund community initiatives

**AB Lucas Student's Council – Executive** 2017 - 2020

- Organized school wide events including dances, fundraisers, assemblies, and competitions
- Took full responsibility for project planning through to completion of event planning for celebratory assemblies

**AB Lucas DECA Chapter – President** 2019 - 2020

- Collaborated with other executives to plan meetings and fundraisers for competitions
- Coached the marketing and hospitality clusters on strong case presentation, business analysis, and creative thinking

**East Park Golf Gardens / Or Shalom – Day Camp Counselor** 2016 - 2020

- Responsible for planning, organizing, and running daily activities for children ages 4 - 12

**Junior Achievement Company Program – Company VP of Marketing and Sales** 2017 - 2020

- Managed social media presence and designed packaging and product displays for the company
- Lead company sales efforts through sales training, coaching, motivating, and organizing sales events with over 100 attendees

## ***Awards and Honors***

**Hack Western 7 – First Place Overall Winner** 2021

- Built a computer application enabling cursor control through facial expression, winning First Place Overall out of 103 submissions

**Fountain Tire Award - Scholarship Winner** 2020

- Won this \$750 award for strong work ethic and a collaborative and indomitable spirit

**Lloyd Carr-Harris Foundation Scholarship - Scholarship Winner** 2020

- Achieved this \$5000 scholarship for academic excellence and a passion and aptitude for business

**DECA Ontario - Provincial Champion in the Marketing Communications Series Event** 2019 - 2020

- Earned the provincial champion title in the marketing communications case competition against over 100 competitors

**Junior Achievement London and District - Vice President of Sales of the Year Award** 2018 - 2019

- Awarded best VP Sales out of 17 candidates for leading my Junior Achievement company to success in sales and revenue generation

## ***Projects***

**Hands Free:** Developed a computer application enabling cursor control through facial expression using Python (pyautogui, dlib)

**HelloWorld:** Created a real-time translation program for Zoom using Python (speech-recognition, threading, googletrans)

**Personal Website:** Designed and programmed my personal website using JavaScript (React) and css

**Spotify Playlist Shuffler:** Produced a script to randomize my spotify playlists using the spotify api and python (flask, spotipy, threading)