ALINA YILDIR

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PROFILE

Data science and analytics specialist with comprehensive expertise in data workflows—converting raw datasets into interactive dashboards, forecasting models, and machine-learning solutions that provide actionable insights and support strategic decisions across diverse industries.

SUMMARY OF SKILLS

Programming & Data Analysis: Python (pandas, NumPy), SQL — data wrangling & quality assurance, exploratory analysis & feature engineering, statistical testing & inference
Data Visualization & BI Platforms: Power BI, Tableau, D3.js, Matplotlib, Seaborn — dashboard development, custom visuals, automated reporting
Machine Learning & Deep Learning: scikit-learn, XGBoost, LightGBM, Prophet, TensorFlow/Keras, PyTorch — model training & validation, cross-validation, hyperparameter tuning, ensemble methods
MLOps & Cloud Infrastructure: AWS (S3, SageMaker), Streamlit, Git — model development & tuning, rapid prototyping of model UIs, code versioning & collaboration

EDUCATION

Master of Data Science and Analytics (Honours), University of Calgary 2025
Certificate in Artificial Intelligence, University of Toronto School of Continuing Studies 2024
Certificate in Data Science, University of Toronto School of Continuing Studies 2022
Ontario College Diploma (Honours) in Internet Applications and Web Development, Algonquin College 2019

EMPLOYMENT EXPERIENCE

Data Science Analyst May 2025 – Present
BGE Indoor Air Quality Solutions, Edmonton, Alberta

- Built Power BI dashboards across Finance, HR, Operations, and IT using Power Query and DAX to enable cross-functional reporting.
- Created a company-wide Power BI JSON theme to enforce visual consistency and accelerate dashboard development.
- Automated reporting for the PM Programs Access database, streamlining work-order management and shortening inventory-planning cycles.

Research Assistant (Deep Learning) May 2025 – Jul 2025
University of Calgary, Calgary, Alberta

- Engineered end-to-end EEG preprocessing workflows in PyTorch—automating 30 s windowing, artifact rejection, cohort normalization, and STFT spectrogram extraction.
- Leveraged transfer learning on an ImageNet-pretrained ResNet-18 with k-fold cross-validation, learning-rate scheduling, early stopping, and data augmentation to train a continuous AHI regression model.
- Validated model performance on held-out subjects to ensure reliable AHI estimation for downstream analytics.
- Details: https://resnet-18-based-eeg-ahi-regression-pipeline.streamlit.app

Web Publisher (Data Visualization) Sep 2020 – Aug 2024
Health Canada, Ottawa, Ontario

- Developed custom AEM components using D3.js to ingest Health Canada datasets and render interactive charts and tables—enabling users to filter data dynamically and gain immediate insights.
- Built and maintained WCAG 2.1 AA-compliant pages on Canada.ca in Adobe Experience Manager, ensuring accessible presentation of data-rich content across the site.

Web Developer (Programming & Data Analysis) Mar 2019 – Sep 2019
OPIN, A Portage CyberTech Company, Ottawa, Ontario

- Developed Power BI dashboards from web-traffic exports to track monthly usage patterns and top pages, enabling data-driven decisions around marketing and UX prioritization.
- Built and maintained WCAG 2.1 AA-compliant Drupal websites for clients such as Holland Bloorview, Hydro Ottawa, and York Region DSB, improving usability and accessibility.

- Refactored and documented HTML, CSS, JavaScript, and PHP codebases, enhancing site performance, maintainability, and scalability.

Doctoral Researcher (Data Analysis & Visualization) Nov 2013 – Mar 2016
National Academy of Sciences of Ukraine, Kyiv, Ukraine

- Collected, validated, and structured experimental datasets for statistical modelling, enforcing rigorous data-quality checks to ensure accuracy and consistency.
- Produced analytical reports and data visualizations that drove insights, supporting peer-reviewed publications and patented innovations.
- Presented findings at international conferences, translating complex analyses into clear, actionable insights for diverse audiences.

SELECTED PROJECTS

AF Risk Prediction | Python (pandas, NumPy), Seaborn, Power BI, XGBoost, Streamlit, LangChain, DeepSeek API
Developed an end-to-end pipeline to forecast new-onset atrial fibrillation from 12-lead ECG and EHR data; trained XGBoost models for patient risk stratification and deployed a Streamlit app with DeepSeek chatbot for interactive clinical insights. Presented at **Statistical Society of Canada Annual Meeting 2025**.

Nutrient Composition of Common Foods | Python (pandas, NumPy), Tableau, Streamlit, LangChain, OpenAI API
Developed interactive dietary analytics from the Canadian Nutrient File; delivered a Tableau dashboard for nutrient comparisons and a Streamlit app featuring clustering-driven insights and an AI chatbot for personalized nutrition guidance. Presented at **YYC DataCon 2025**.

Olympic Medal Performance Analysis | Python (pandas, NumPy), Seaborn, Power BI, scikit-learn
Modelled the impact of GDP and population on 2024 medal counts using regression and clustering; created interactive visualizations to highlight key drivers.

Enhancing Bank's Personal Loan Campaign | Python (pandas, NumPy), Seaborn, Power BI, scikit-learn, TensorFlow/Keras
Built a sequential neural network to predict customer responsiveness to personal loan offers; executed data preprocessing and feature engineering, conducted hyperparameter tuning and cross-validation, and delivered a high-performance model to drive targeted marketing.

Credit Card Default Prediction | Python (pandas, NumPy), Seaborn, Power BI, scikit-learn, XGBoost
Built predictive models to forecast credit card defaults from demographic and financial data; performed exploratory analysis and feature engineering, visualized key distributions, and trained and compared regularized logistic regression, random forest, and XGBoost using k-fold cross-validation for robust risk prediction.

Data-Driven Department Optimization | Python (pandas, NumPy), Seaborn, Power BI, scikit-learn, XGBoost, Prophet, TensorFlow/Keras, NLTK
Designed a comprehensive cross-department analytics suite: predicted HR turnover with logistic regression and neural networks; segmented marketing and sales audiences using K-Means and autoencoders; generated sales forecasts via Prophet; and performed PR sentiment analysis with Naive Bayes and logistic regression, enabling data-driven strategic decisions.

Additional projects available at https://yildiramdsa.github.io and https://github.com/yildiramdsa.

AWARDS

Diamond Rewards – Be the Expert (2025), BGE Indoor Air Quality Solutions
Assistant Deputy Minister's Merit Award – Collaboration & Service Excellence (2023), Health Canada
Assistant Deputy Minister's Merit Award – Contribution to the Improvement of the Health of Canadians (2023), Health Canada
COVID-19 Commemorative Coin – Support & Contribution to Canada's COVID-19 Response Efforts (2023), Public Health Agency of Canada