EDWARD (JEONGHAN) CHANG

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Skills Summary

- **Data Analytics/Science Skills:** Data Modeling, Data Visualization, Machine Learning, LLM Fine-Tuning, A/B Testing, Hypothesis Testing, Data Cleaning/Manipulation, EDA, ETL, Experimental Design, Forecasting
- **Tools & Software:** R, Python libraries/frameworks (e.g. scikit-learn, pandas, numpy, Pytorch), SQL (e.g. Joins, Queries, Views), C/C++, Microsoft Office/Excel (e.g. Power Query, Pivot table), PowerBI, Tableau, Git, GCP, Docker
- **Soft skills:** Skilled in collaboration, communication, stakeholder management, and analytical problem-solving, with attention to detail, adaptability, and effective time management. Adept at coordinating cross-functional teams to deliver complex insights, manage priorities, and consistently meet deadlines.

Education

University of Waterloo   Sept 2018 - April 2024
Bachelors of Mathematics in Statistics   Waterloo, ON

Experience

Business Data Analyst   Jan 2024 - April 2024
Gourmet Express   Etobicoke, ON
- Conducted stakeholder interviews and utilized advanced **Excel VBA**, including VLOOKUP, and Pivot Tables, to perform analysis of menu items and inventory, identifying key operational inefficiencies.
- Developed an ingredients management system using Python to optimize inventory operations, recommending promotional sales for items with excess inventory, resulting in a **5% increase** in margins.
- Led a customer survey using Google Forms and analyzed responses with Google Analytics, uncovering insights that led to a **10% reduction** in packaging expenses by making utensils optional in the ordering process.
- Scraped 300+ Google reviews with Python (Selenium) and applied OpenAI **NLP** to extract insights on product quality, presenting findings in **Power BI** dashboards to inform data-driven decisions.

Business Intelligence Analyst   June 2024 - August 2024
Galactic Innovators Group   Remote
- Designed and implemented an Excel VBA tool to automate expense categorization, reducing manual effort and enhancing financial forecasting accuracy, improving **processing efficiency by 20%.**
- Conducted competitive analysis on 50+ products using **SQL**, extracting actionable insights to identify market opportunities and inform sales and marketing strategies.
- Developed and presented financial performance forecasts and KPI dashboards in **Power BI**, providing data-driven insights to optimize stakeholder decision-making, while managing project roadmaps in Jira.

Projects

Customer Prediction & Recommendation System   Jan 2025 - Present
- Conducted exploratory data analysis and feature engineering on multi-source customer datasets using SQL, improving data preprocessing efficiency by **30%**, and prototyped collaborative filtering and neural network-based recommendation systems to establish baseline metrics.
- Designed a scalable machine learning pipeline using **PyTorch** and scikit-learn and developed personalized recommendation algorithms.

Kaggle: European Survey Predictive Modeling   Jan 2024 - April 2024
- Led comprehensive Exploratory Data Analysis using SQL for complex querying, data aggregation, and variable transformation, while performing data preprocessing in R, including imputation and outlier detection, to ensure data consistency and accuracy.
- Developed and optimized predictive models (Random Forest, XGBoost, Neural Network), achieving a **20% accuracy improvement** through model stacking, and enhanced training efficiency with rigorous cross-validation and hyperparameter tuning.
- Placed **6th** out of 38 teams with a 0.84454 evaluation score, utilizing advanced model optimization techniques and visualizations such as feature correlation heatmaps, and log-loss accuracy charts with Matplotlib and Seaborn.

ASA DataFest: ScotiaBank Mobile App Review LLM Analysis   Feb 2024
- Developed **ETL pipelines** and processed 50K+ app reviews using SQL, applying LLM-based **zero-shot learning** and K-means clustering to categorize user feedback with **75%+ accuracy.**
- Identified the **top 3** recurring user complaints through sentiment analysis and regression modeling and presented actionable insights to the Scotiabank Mobile App team to deliver feature enhancements and bug fixes.