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.
- Conducted a customer survey with **Google Analytics**, regarding utensil needs, resulting in 10% packaging expenses reduction by offering utensils optional in the order procedure.
- 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

- Performed competitive analysis on over 50 products by leveraging **SQL** to extract actionable insights, identify market opportunities, and influence sales and marketing strategies.
- Developed and delivered financial performance forecasts and KPI dashboards in **Power BI**, optimizing stakeholder decision-making; managed project roadmaps in **Jira**.
- Engineered an **Excel VBA** tool to automate expense categorization, reducing manual effort by 80%, enhancing financial forecasting accuracy, and improving expense management efficiency across the organization.

Projects

Customer Prediction & Recommendation System Nov 2024 - Present

- Designed a scalable machine learning pipeline leveraging **PyTorch** and **scikit-learn** to develop and train deep learning models for customer churn prediction and personalized recommendations.
- Performed exploratory data analysis (EDA) and feature engineering on multi-source customer datasets using **SQL** to extract and preprocess data, prototyping collaborative filtering and neural network-based recommendation systems to establish baseline metrics.

European Survey Predictive Modeling Jan 2024 - April 2024

- Led comprehensive Exploratory Data Analysis using **SQL** for complex querying, data aggregation, and variable transformation; performed data preprocessing in **R**, including variable dropping, imputation, and outlier detection, to ensure data consistency and accuracy.
- Developed and optimized data models (Random Forest, XGBoost, Neural Network, etc.) using **Python**, achieving a 20% accuracy improvement through model stacking.
- Improved training efficiency by over 100% and enhanced model accuracy by 2% through rigorous cross-validation, hyperparameter tuning, and detailed visualization, including heatmaps and log-loss graphs, using **Matplotlib**.

ScotiaBank Mobile App Review LLM Analysis Feb 2024

- Executed complex **SQL** queries, including JOINs, subqueries, and window functions, to clean and transform data during the ETL process, handling over 50K+ observations by grouping, filtering, and aggregating key variables such as app versions, ratings, and review dates.
- Implemented **LLM zero-shot learning** with K-means clustering for categorizing user feedback and applied linear regression analysis to identify significant trends and insights, followed by delivering interactive data visualizations in **PowerBI** for actionable recommendations to the Scotiabank Mobile App development team.