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, Jira, Git, Linux
- **Soft skills:** Analyze opportunities and trends, Build and maintain client relationships, Collaborate effectively to achieve goals, Communicate insights through impactful presentations, Manage tasks precisely and meet deadlines consistently

Professional Experience

Business Data Analyst | Google Analytics, Excel, Python, PowerBI　　　　　　　　　　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+ customer reviews from Google using **Python's Selenium** package and analyzed with OpenAI's NLP to identify valuable feedback.

Business Intelligence Analyst | Excel, Jira, PowerBI, SQL　　　　　　　　　　June 2024 - August 2024
Galactic Innovators Group　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Remote

- Analyzed over 50 competitive products using **SQL** to filter and extract relevant data, reported insights with **Power BI**, and provided recommendations to support business strategies, sales, and marketing.
- Delivered financial performance forecasts and KPI reports through **Power BI**, managed financial project roadmaps and milestones in **Jira**, and conducted cost analyses to support pricing and business optimization strategies.
- Created an **Excel VBA** tool with pivot tables to automate expense categorization, enabling predictive analytics for precise financial forecasting and streamlining expense management processes.

Projects

ScotiaBank Mobile App Review LLM Analysis | MySQL, Python, R, PowerBI　　　　　　　　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.

European Survey Predictive Modeling | Python, MySQL, R　　　　　　　　　　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**.

Netflix Interaction Factor Analysis | R, MySQL, Python　　　　　　　　　　July 2021 - Aug 2021

- Performed an **ad-hoc analysis** of Netflix users' interactions (e.g. browsing time) influenced by various interface factors (e.g. tile size, preview length), uncovering critical user engagement patterns.
- Executed factor screening using **A/B testing** methodology and applied the **Steepest Descent algorithm** to optimize user response, identifying the significant factor related to user interactions.

Education

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