Alex Lee
Mid-Level Data Scientist

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SKILLS

Core Strength	**End-to-End Modeling, Data Mining, Experimental Design, Causal Inference, Statistics, Storytelling**
Programming	**Python**: Scikit-learn, PyTorch, PySpark, SciPy, Pandas, NumPy, Matplotlib, Django
	R: Tidyverse, Tidymodels, Shiny, Quarto, Plumber
Other	**SQL, Hadoop, CSS, Tableau, PowerBI, Alteryx, Databricks, Azure, GCP, Git**, Bilingual **English and Korean**

EXPERIENCE

Senior Business Intelligence Engineer
Humana
Jun. 2023 – Present
Remote, US

- **Developed** and **Deployed** a **LightGBM Classifier** model using **Sklearn**, **PySpark**, and **Azure DevOps** to predict balance and fall risks among 5 Million Medicare members, achieving a testing F1 score of 0.75.
- **Developed** a **Ridge Regression** model using **Sklearn** to forecast Health Equity Index Scores, achieving testing R Squared of 0.85.
- Built **financial valuations** on intervention campaigns to support the business decision making process, using **causal inference** techniques like Matching (**Coarsened Exact Matching, Propensity Score Matching**), Regression (**Diff-in-Diff**, **Regression Discontinuity Design, Structural Equation Modeling**), and Text Mining (**Topic Modeling, Text Classification**).
- **Consulted** business partners on **experimental designs**, helping to refine study parameters and sampling methodologies to ensure robust and causally interpretable results. Managed 5+ study campaigns.

Lead Business Intelligence Analyst
The Hershey Company
Dec. 2022 – Jun. 2023
Hershey, PA

- Optimized a **Random Forest model** with **Python SkLearn** through feature engineering and hyperparameter tuning, achieving a testing AUC score of 0.88, predicting employee turnover to provide proactive targeting for retention interventions.
- **Developed** a **real-time REST API** with **Python Django**, integrating **Survival Analysis, PCA, and Factor Analysis** to provide non-technical stakeholders with standardized talent acquisition KPIs and models.

Senior Analyst, HR Reporting (Senior Data Analyst)
The Hershey Company
Mar. 2022 – Dec. 2022
Hershey, PA

- Conducted Adverse Impact Analysis using **R**, applying statistical testing techniques like **Chi-square, t-test**, and **ANOVA** to reveal complex relationships within diversity groups and provide strategic guidance.
- Built **financial valuations** on tuition reimbursement policy in **R**, demonstrating its positive impact on performance, retention, and management perception. Resulted in the allocation of over **$6M** towards the program.

Analyst, HR Reporting (Data Analyst)
The Hershey Company
Nov. 2018 – Mar. 2022
Hershey, PA

- **Developed** and **automated 7+ end-to-end dashboards and apps** using **R Shiny, Tableau,** and **SQL**, enabling continuous monitoring of People Analytics KPIs, leading to direct cost reduction of over **$100K/year**.
- **Developed** and **automated** periodic internal and external reports and surveys using **R Markdown**, reducing the overhead hours spend by **90%.** Contributed to earning a Great Place to Work recognition and 1st place in DiversityInc Top 50.
- Optimized **data models and ETL pipelines in SQL Server**, resulting in **40 hours/month reduction in data prep time** for users.

EDUCATION

Master of Applied Data Science	University of Michigan – Ann Arbor, MI	*Dec. 2025 (Expected)*
Bachelor of Business Administration	University of North Texas – Denton, TX	*Aug. 2015*

PROJECTS

[Algorithmic Stock Trading using LSTM Model in PyTorch](#)	*May 2024*
[Text to SQL Transformer Model in PyTorch](#)	*May 2023*
[Using ML to Identify Risk Factors and Predict Fatal Outcomes in Protests](#)	*November 2022*