Alex Lee
Senior Data Scientist

United States 📍 [LinkedIn](#) in
(832) 795-6031 📱 [Website](#) 📖
alexllee@umich.edu ✉ [Github](#) ⭘

SKILLS

Core Strength	End-to-End ML Modeling, Data Mining, Experimental Design, Causal Inference, Statistics, Storytelling
Programming	**Python**: Scikit-learn, PyTorch, PySpark, SciPy, Statsmodels, Pandas, NumPy, Matplotlib, Django
	R: Tidyverse, Tidymodels, Shiny, Quarto, Plumber
Other	SQL, Hadoop, Tableau, PowerBI, Alteryx, Databricks, Azure, Git, Hug. Face, Llama, Stable Diffusion, Korean

EXPERIENCE

Humana — Remote, PA

Senior Data Scientist — Sep. 2024 – Present

- Engineered an **ensemble regression** model to forecast the Health Equity Index, achieving a MAE of 2.0 on the 0-100 scale. The model **automates** feature collection, training, fine-tuning, and monitoring across 26 sub models through a CI/CD pipeline, and is a critical component of the Star Rating ecosystem, with potential impacts valued in the **hundreds of millions of dollars**.

Senior Business Intelligence Engineer — Jun. 2023 – Sep. 2024

- Developed and deployed an **LGBM classifier** using CI/CD methodologies to predict fall risks among 5M Medicare members, doubling the precision of identifying at-risk individuals. This contributed to a **$2M** annual revenue increase.
- Developed **financial valuations** for intervention campaigns using causal inference techniques like **RCTs**, **Matching**, **DiD**, and **RDD**, preventing over **$100K** in annual costs and contributing to an annual revenue increase of over **$5M**.
- **Consulted** business partners on **study designs**, including **A/B testing**, refining study parameters and sampling methodologies to ensure robust and causally interpretable results. Successfully led over **5** study campaigns from concept through execution.

The Hershey Company — Hershey, PA

Lead Business Intelligence Analyst — Dec. 2022 – Jun. 2023

- Optimized a **Random Forest model** through feature engineering and hyperparameter tuning, achieving an AUC score of 0.88 on the test set, predicting employee turnover to provide proactive targeting for retention interventions.
- Developed a **real-time REST API**, integrating **Survival Analysis, PCA, and Factor Analysis** to provide advanced recruitment KPI monitoring and process optimization.

Senior Analyst, HR Reporting (Senior Data Analyst) — Mar. 2022 – Dec. 2022

- Conducted Adverse Impact Analysis, 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, demonstrating its positive impact on performance, retention, and management perception. Resulted in annual allocation of over **$6M** towards the program.

Analyst, HR Reporting (Data Analyst) — Nov. 2018 – Mar. 2022

- **Developed** and **automated** 7+ end-to-end **dashboards** and **reports**, streamlining the monitoring of People Analytics KPIs. This initiative replaced third-party tools, resulting in a direct cost savings of over **$200K** annually.
- Optimized **data models and ETL pipelines**, resulting in **40 hours** per month reduction in data prep time for users.

EDUCATION

Master of Applied Data Science	University of Michigan – Ann Arbor, MI	*Apr. 2026 (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*