Alex Lee

Senior BI Engineer

Hummelstown, PA | [LinkedIn]
(832) 795-6031 | [Website]
alexllee@umich.edu | [Github]

COMPUTER SKILLS

Programming Languages:
R (*Tidyverse, Shiny, Quarto*)
Python (*SkLearn, Pyspark, PyTorch*)
Java

Databases:
MySQL, SQL Server

Other Tools:
SQL, CSS, Tableau, Alteryx,
Git, Databricks, MS Azure

DOMAIN SKILLS

ETL (Extract, Transform, Load)
Dashboard Development
Machine Learning
Experimental Design
Causal Inference

EDUCATION

Master of Applied Data Science
University of Michigan
Ann Arbor, MI
April 2026

Bachelor of Business Admin.
University of North Texas
Denton, TX
August 2015

PROJECTS

Text to SQL Transformer
Model in Pytorch | May 2023

Using ML to Identify Risk Factors
and Predict Fatal Outcomes in
Protests | November 2022

CERTIFICATES

Introduction to Programming with
Python and Java Specialization |
March 2023

Data Science: Foundations using R
Specialization | June 2021

LANGUAGES

English – Native Level
Korean – Native Level

WORK EXPERIENCE

Senior Business Intelligence Engineer
Humana

Jun. 2023 – Present
Remote, US

- **Developed** and **deployed** a **LightGBM model** with **Python Sklearn** and **Pyspark,** achieving a testing F1 score of 0.7. Predicted balance and falling issues among customers, ultimately enabling preemptive patient care.
- Built **financial valuations** on intervention programs with **Python** to support the decision-making process in Stars and Risk Adjustment, using **data mining, causal inference, simulation, and modeling** methods.

Lead Business Intelligence Analyst
The Hershey Company

Dec. 2022 – Jun. 2023
Hershey, PA

- Upgraded 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 insights for retention interventions.
- Developed a **real-time REST API** in **R**, integrating **survival analysis** and **factor analysis** to provide non-tech stakeholders with standardized talent acquisition KPIs and models.
- Led the implementation of an **ETL pipeline** in **SQL Server** to deploy a complex talent acquisition data model, enabling advanced analytics and automation capabilities.

Senior Analyst, HR Reporting
The Hershey Company

Mar. 2022 – Dec. 2022
Hershey, PA

- Conducted Adverse Impact Analysis using **R**, applying statistical hypothesis testing such as **Chi-square, t-test**, and **ANOVA** to reveal complex relationships within diversity groups and provide strategic guidance.
- Performed **financial valuation** of the tuition reimbursement program in **R**, demonstrating its positive impact on performance, retention, and management perception. This analysis resulted in the allocation of over **$6M** towards the program.

Analyst, HR Reporting
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 annual cost reduction of over **$100K**.
- **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 3rd place in DiversityInc Top 50.
- Crafted a **Tableau dashboard** enabling stakeholders to comprehensively evaluate and forecast the implications of the **Covid-19** pandemic on the plant **labor hours**.
- Facilitated **data modeling in SQL Server** to prepare production-ready people datasets, resulting in a monthly reduction of **over 40 hours in data preparation time** for users.
- **Designed** and implemented a **R Shiny dashboard** for the living wage initiative, addressing pay equity concerns. This led to closure of **100%** of existing pay gaps.