

# Jeremiah Geneve

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## Education

Lehigh University, Bethlehem, PA

*Expected Graduation: May 2025*

**Bachelor of Science - Business Analytics and Finance**; Focus on Data Engineering and Backend Development

- **Related Coursework:** Python for Business, Advanced Investment Data Science for Finance, AI for Business, Predictive Analytics, Business Data Management, Consumer Insights through Data Analysis, Accounting Data and Analytics, Business Analytics, Security Analysis and Portfolio Management

## Work Experience

### Application Developer Intern

*June 2024 - August 2024*

*Marsh McLennan - New York, NY*

- Developed Python-based backend software to extract and parse contract data using MMC's internal Text Extraction API (OCR) and Microsoft's Azure OpenAI Service API (RAG), automating retrieval processes and improving accuracy by eliminating manual errors at an overall efficiency rate of over 80%.
- Designed and implemented an invoice validation system utilizing Python-based rule engines, cross-referencing invoice data against contractual terms, and ensuring a high level of billing accuracy by automating checks and balances.
- Created an object-oriented programming (OOP)-based automated workflow system, which enhanced the scalability of data extraction and transformation processes.

### Finance and Technology Operations Intern

*June 2023 – August 2023*

*NYC Department of Housing & Preservation Development - New York, NY*

- Developed a Python script to automate the reconciliation of over 5,000 monthly financial transactions, reducing processing time by 20% and improving accuracy in identifying discrepancies.
- Collaborated with the budgeting team to create a Python-based forecasting model that used historical data to predict quarterly spending, enhancing resource allocation efficiency using SciKit-Learn, Pandas, Numpy.
- Built a Power BI dashboard to visualize key performance indicators (KPIs) related to departmental budgets, enabling senior management to track spending trends and forecast budget requirements in real time.

### Backend Data Engineering Intern

*Feb 2023 - May 2023*

*Devola Technologies - Remote/Bethlehem, PA*

- Built ETL processes to extract data from Stripe APIs and load it into a centralized database for analytics and reporting.
- Collaborated with a Ukrainian team to build a Node.js backend, focusing on user authentication, Stripe payments.
- Designed schemas for user profiles and payment history, ensuring data integrity and optimized query performance.

## Project Experience

### Machine Learning & Model Development (Airline Customer Satisfaction)

*March -May 2024*

*Predictive Analytics - Lehigh University*

- Developed Logistic Regression, Neural Network, and K-Nearest Neighbors (KNN) model in R to predict customer satisfaction based on airline travel data, all of which performed with an accuracy of 87.5% or higher.
- Used confusion matrix analysis and accuracy metrics to assess and refine the model's predictive performance.
- Implemented data partitioning techniques to split dataset into training and testing subsets for model validation.

### Portfolio Optimization and Risk Analysis Dashboard

*March - May 2024*

*Business Analytics - Lehigh University*

- Designed a web-based application using Python and Streamlit to help users manage and optimize financial portfolios, integrating real-time market data and advanced analytics: Monte Carlo simulations, Time-Series Analysis, and Mean-Variance Optimization (MVO)
- Leveraged financial APIs like Yahoo Finance to fetch live and historical data, enabling dynamic portfolio updates and the computation of metrics such as expected return, volatility, Sharpe ratio, and Value at Risk (VaR).

## Skills

**Technologies:** Python (Pandas, Sklearn, Flask, Hugging Face, Numpy, TensorFlow), JavaScript (React, Node.js), Java, C++, SQL (Oracle DB), Git, Excel, NoSQL (MongoDB)