# JACK BLAND

Data Scientist | Data Analyst | Business Analyst
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## SUMMARY

MS Data Science candidate at NJIT (May 2026) with a Mathematics foundation and hands-on experience building ML models, optimizing SQL pipelines, and translating complex data into business decisions. Seeking full-time roles in data science, data analytics, or business intelligence.

## TECHNICAL SKILLS

**Languages:** Python (Pandas, NumPy, LightGBM, Matplotlib, Seaborn), SQL (MySQL), R, JavaScript
**Analytics & BI:** Tableau, Excel, Statistical Modeling, Predictive Analytics, Exploratory Data Analysis
**Cloud & Engineering:** AWS (S3, EC2, Kinesis, Athena), Data Engineering, Query Optimization, Data Modeling
**Tools:** MySQL Workbench, Workiva, Django, Git, Oracle Data Modeler, Jupyter, RStudio

## TECHNICAL PROJECTS

**Heart Attack Prediction & Explainable AI** | *Python, LightGBM, LIME, AdaBoost, Random Forest*

- Evaluated 4 ensemble ML models on clinical patient data; LightGBM achieved 98.11% test accuracy — top result across all evaluated architectures.
- Applied LIME to surface critical biomarkers (Troponin, KCM), enabling clinician-interpretable predictions from black-box ensemble models.

**Clustering Algorithm Engineering** | *Python, NumPy, Matplotlib*

- Implemented K-Means and HAC (Single/Complete Linkage) from scratch using NumPy across 3 independent trials of 500 3D points with outlier removal.
- Benchmarked both algorithms using a custom Silhouette Score script; K-Means outperformed HAC across all 3 trials (scores: 0.2559, 0.2522, 0.2535).

**Apriori Association Rule Mining** | *Python, MySQL*

- Built Apriori and brute-force algorithms from scratch; Apriori pruning strategy reduced runtime by ~33% (0.103s vs 0.155s) on identical transaction datasets.
- Mined product co-purchase patterns across 5 MySQL transaction databases to surface cross-sell and inventory optimization opportunities.

**F1 Driver Performance Analysis** | *Python, Scikit-learn, Pandas, Seaborn*

- Merged 6 F1 datasets to engineer per-driver seasonal features; applied K-Means (k=5) to segment drivers into performance tiers by points, DNFs, and qualifying average.
- Built logistic regression model predicting teammate head-to-head outcomes; achieved 59% accuracy and 73% recall for race winners on balanced dataset.

**HR Attrition Dashboard** | *Tableau, Excel*

- Analyzed IBM HR dataset (1,470 records, 35 features) to surface attrition drivers; built calculated fields for Attrition Rate and Attrition Numeric.
- Designed 6-sheet interactive Tableau dashboard examining overtime vs. attrition across job roles, revealing overtime as a key attrition predictor.

**Full-Stack E-Commerce App (Simple Sugar)** | *Django, JavaScript, HTML/CSS*

- Built a full-stack cookie shop web app with JSON-driven product catalog, real-time cart updates, user authentication, and complete checkout flow.

## PROFESSIONAL EXPERIENCE

**Internal Audit Intern** | OceanFirst Bank — Red Bank, NJ *June 2023 – Aug 2023*

- Analyzed internal audit findings in Workiva to support SOX compliance; validated financial data accuracy against regulatory standards across multiple product lines.
- Compiled structured audit reports and presented key findings to cross-functional stakeholders, maintaining 100% data traceability across departments.

**Engineering Intern** | Port Authority of NY & NJ *Summer 2019*

- Produced data-driven workforce and environmental risk reports to support operational planning decisions between engineering and planning teams.

## EDUCATION & CERTIFICATIONS

**M.S. Data Science (Computational Track), NJIT** — GPA: 3.37 *Expected May 2026*
**B.S. Mathematics, CUNY College of Staten Island** — GPA: 3.3 *Dec 2023*
Graduate Certificate in Data Mining, NJIT | Data Engineering Bootcamp, Promineo Tech (AWS, SQL, Python)