

# Neal Iyer

Data & AI Analyst | McLean, VA | 240-644-7960 | neal.iyer88@gmail.com | [Github](#)

## Professional Summary

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Data & AI Analyst with 3+ years of experience driving business impact through machine learning, statistical modeling, and cross-functional analytics. Adept at transforming large datasets into actionable insights that optimize pricing, forecasting, and operational strategy.

## Professional Skills

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- **Languages & Tools:** Python (Pandas, NumPy, Scikit-Learn, TensorFlow), R (basic), SQL (PostgreSQL, SQL Server), Spark, Git
- **Visualization & Reporting:** Tableau, Power BI, Advanced Excel (PivotTables, VBA), MERN Stack (basic)
- **Data Management:** ETL Pipelines, Data Warehousing (Snowflake, SPARS), GCP (working knowledge)
- **Statistical & ML Techniques:** Regression, Classification, Time Series (ARIMA), Feature Engineering, Causal Inference
- **Soft Skills:** Stakeholder Collaboration, Agile Delivery, Executive Communication

## Experience

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### Substance Abuse and Mental Health Administration, Department of HHS

Budget Analyst

Dec '23 - Mar '25

- Engineered a Tiered Allocation Proportion (TAP) table in Excel to allocate shared costs across 80+ programs, leading to the reallocation of over **\$100M in overhead**, enhancing budget transparency.
- Developed **automated Python + SQL pipelines** for payroll tracking, integrating 10+ funding streams; improved reconciliation accuracy by **25%** and reduced manual effort by **40%**.
- Conducted **exploratory data analysis and causal impact evaluations** to identify drivers of budget variance, informing cost-saving reallocations and workforce planning.
- Created **real-time Power BI dashboards** for payroll and KPI trends, accelerating executive decision-making cycles.
- Queried large-scale datasets via SQL (SPARS), standardizing budget reporting and improving data integrity across systems.
- Built **statistical models** using Python Scripts to automate funds tracking and forecast \$165M payroll expenditures, improving projection accuracy by **15%** and supporting strategic staffing.
- Automated incentive reporting with **Excel VBA**, saving **120+ annual hours** and improving tracking precision by **85%**.

### CRI - Department of the Interior

Budget Analyst

Mar '21 - Dec '23

- Developed SQL-based ETL pipelines to clean and merge multi-source budget data, improving monthly reporting accuracy by **20%**.
- Built financial performance dashboards in Power BI, enabling real-time visibility into divisional cost trends and operational KPIs.
- Standardized data collection protocols in SQL and Excel, enhancing alignment across department heads and analysts.
- Partnered with IT to align backend systems with finance tools, ensuring **scalability** and accuracy of reporting infrastructure.

### Cresa

Accounting Analyst

Dec '20 - Mar '21

- Automated reconciliation and expense tracking using Excel macros, reducing errors by **35%** and improving audit readiness.
- Supported scenario modeling and dynamic budget planning, aiding senior leadership with timely financial insights

### FrontStream

- Led financial reconciliation for Fortune 500 clients, improving transaction accuracy by 30% through automation.
- Built SQL-based audit tools for Fortune 500 fund disbursements, **cutting discrepancies by 30%** and increasing transparency.
- Automated monthly reports, eliminating **250+ manual hours/year** and improving compliance across audit cycles.

## Education and Certifications

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### Flatiron Data Science Bootcamp

Certificate | General Studies

- Advanced expertise in **Python, SQL, data visualization, machine learning, and feature engineering.**
- Built and optimized machine learning models for classification, regression, and time series forecasting (ARIMA, XGBoost, LightGBM, Random Forests, Gradient Boosting, Decision Trees) to extract insights from complex datasets.

### University of Maryland (UMBC) - Baltimore County

Bachelor of Arts | Economics

### HackerRank Intermediate SQL Certification

## Projects

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### Capstone Project: Substance Abuse Risk Prediction using Machine Learning

[Substance Abuse Risk](#) | Predicting opioid abuse risk using classification models with key behavioral and substance use indicators.

- Built ML classifiers to detect high-risk individuals using behavioral health data, supporting early intervention.
- Used NLP sentiment analysis to evaluate outreach strategies, visualized in **Tableau dashboards** for policy stakeholders.

### Zillow Real Estate Price Forecasting w/ Time Series (ARIMA)

[Zillow](#) | Time series forecasting for real estate prices using ARIMA and advanced statistical modeling.

- Applied ARIMA time series models to predict housing prices across regions, supporting data-driven real estate investments.
- Conducted trend and seasonality analysis to enhance forecast precision and model robustness.