

# Matthew Nicol

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Huntersville, NC

## Education & Certificates

- Master's in Computer Science, University of Illinois Urbana-Champaign Jan. 2025 – Current
- B.S. in Computer Science, High Point University Aug. 2020 – May 2024

## Technical Skills

**Programming & Languages:** Python, C++, SQL

**Data Analytics & Visualization:** Power BI, Tableau, Excel, Jupyter

**Databases & Cloud:** PostgreSQL, MySQL

## Projects

### *S&P 500 Stock Performance Analysis*

- Automated daily equity data ingestion using **Python** (**yfinance**, **pandas**, **SQLAlchemy**) and stored results in **PostgreSQL** for centralized access.
- Optimized analytical queries with **PostgreSQL(CTEs, Subqueries, Window Functions)** to calculate returns, volatility, and trend indicators.
- Built an interactive **Power BI** dashboard with **DAX** measures (**CALCULATE**, **DATESINPERIOD**, **TOPN**) for dynamic filtering and sector-level comparison.
- Presented key performance metrics (avg return, win rate, volume trends) through color-coded KPIs, enabling non-technical stakeholders to interpret market behavior.

### *HR Employee Attrition & Performance Analytics*

- Integrated HR data sources using **Excel Power Query** and **pandas** for data integration, processing employee records to create a master dataset for workforce analytics.
- Developed a refreshable Excel workbook with dynamic pivot tables, enabling ongoing attrition analysis by department, tenure, and demographics.
- Performed statistical analysis using **pandas** and **NumPy** (correlation matrices, percentile calculations, cohort analysis) to quantify training ROI and identify high-risk employee segments.
- Created data visualizations using **Seaborn** and **Matplotlib** to translate complex HR metrics into actionable insights for non-technical stakeholders, supporting strategic workforce planning initiatives.

### *NYPL Menus Data Profiling and Cleaning*

- Cleaned and organized a 500K+ record historical dataset using **Python** and **OpenRefine**, ensuring data accuracy for analysis of historical dining trends.
- Standardized data to resolve inconsistencies (nulls, whitespace, case errors), improving data integrity for research purposes.
- Produced data-quality improvement reports and visual workflows, adopted by the curation team to streamline future data-cleaning workflows.

## Work Experience

*Administrative Assistant, EDU Healthcare, Cornelius, NC*

Summer 2022

- Processed resumes and applications for open healthcare positions, organizing and tracking candidate data using efficient data entry tools to support hiring teams.
- Maintained accurate records and minimized document errors through detailed data verification, improving overall hiring efficiency.
- Coordinated with the business development team to align candidate profiles with client needs, strengthening client satisfaction and reducing placement turnaround time.

*Data Entry Clerk, EDU Healthcare, Huntersville, NC*

Summer 2021

- Entered and maintained candidate and client information across multiple databases, enhancing data consistency and accessibility.
- Conducted online research and professional networking to generate potential healthcare job leads, supporting business development initiatives.
- Ensured data integrity and streamlined record management processes, contributing to improved team efficiency and faster candidate matching.