

# RYAN RICHARDSON

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**Impactful Data Scientist and Analytics Engineer with 10+ years of experience across legal, energy, and technology sectors.** Specializing in data engineering and artificial intelligence pipelines, I design and optimize scalable, distributed compute infrastructures that power machine learning solutions. Proficient in Python, I build and maintain robust data pipelines, transforming raw data into actionable insights that enable leadership teams to make informed, strategic decisions. I'm passionate about driving high-impact results by aligning data strategy with business goals and leading the creation of technical solutions to maximize data-driven outcomes.

## Technical Skills

Python | SQL | R | Salesforce | Tableau | SQLServer/SSIS | ETL/ELT | Query Writing and Design | Git | Advanced Excel | Google Analytics | AWS | Docker | NoSQL/NewSQL | Snowflake | Spark | Neo4J | Kafka | Elastic

## Professional Experience

**2u, Inc.;** Lanham, MD

2020 – Present

**Analyst | Revenue Strategy and Analytics** | 2024 – Present

Design and implement SQL-based analytics pipelines and Tableau dashboards to derive actionable insights that drive macro-level strategy across multiple product lines. Ensure data quality and maintain resources to uphold data veracity, enabling accurate, reliable decision-making. Cleanse and analyze datasets to extract insights, communicating findings to stakeholders at all levels, including C-suite executives. Support degree programs and multiple business lines by delivering tailored analytics solutions.

- Developed new Net Promoter Score analytical dashboards in Tableau to drive \$150 million investment in business-to-business portfolio strategies.
- Built Salesforce reporting tools for sales and customer success teams to identify critical opportunities to drive a 75% year-over-year improvement in revenue.
- Served as subject matter expert with the data engineering team to identify malfunctioning data pipelines and ideate cost-effective solutions.
- Worked as a liaison to marketing team to identify new lead generation opportunities and develop 40% increase in organic lead volume and a 20% increase in lead acquisition.
- Running AB tests in Optimizely that drive product design and decision-making.
- Develop dashboards to assess the effectiveness of AI-driven text identification and classification solutions, providing insights to inform management strategies that incorporate these tools.

**Senior Admissions Counselor** | 2020 – 2024

Qualify prospective students for the Harvard Business Analytics Program and Columbia Artificial Intelligence Program by assessing skills, backgrounds, and goals. Situate students within the context of the programs. Serve as a stakeholder liaison with program analytics to build reporting solutions in Salesforce, strategize around performance, and new product implementation to train the team on new technologies seamlessly.

- Increased the contact rate for prospective students 10%, achieving a 48% opt-in rate, and doubled the applicant submission rate by pioneering and managing the rollout of an SMS system and new process.
- Deployed analytical solutions in Salesforce, Excel, and Tableau to aid Columbia University's applicant pipeline, identifying opportunities to standardize admission criteria, improve class composition, and increase student satisfaction.

**Source Energy Partners;** Midland, TX

2018 – 2020

**Acquisitions**

Communicated with mineral holders to streamline the process of determining transaction viability by gathering data and conducting asset value analysis to satisfy clients and the expected returns of our private equity fund. Conducted legal research to analyze the size of prospective mineral acquisitions and determine accurate ownership and clarity in title.

- Served as technical lead and subject matter expert with third-party consultants to assist in the adoption and implementation of a Salesforce database solution, improving the speed in contacting clients and the efficiency and reliability of the data analysis of client assets.

**Relevant Project Experience**

**Machine Learning Team Lead** | 2024 – 2024

**SEO Opportunity Identification** | MIDS Program Project | GitHub: <https://shorturl.at/wLE8f>

Produced an analytical report exploring opportunities to improve search engine optimization strategies. Visualized traffic generating search queries and differences between query volume and traffic generation. Designed feature engineering and machine learning pipeline to create word embeddings, encode, and cluster queries, and subsequently identify which query features were valuable in predicting traffic volume.

- *Tools Used:* Python, PySpark, R, GGplot, Sentence Transformer, FAISS

**Machine Learning Team Lead** | 2023 – 2023

**Tool Wear Deep Learning Regressor** | MIDS Program Project | GitHub: <https://shorturl.at/mMtu0>

Designed a baseline deep learning convolutional neural network and a comparison model with an added attention mechanism, reducing RMSE loss by 33% and increasing  $R^2$  values from 0.39 to 0.73. Lead a team of 4, directing methodology and delegating tasks.

- *Tools Used:* Python, Pandas, Numpy, Matplotlib, Seaborn, Scikit-Learn, Keras

**Data Engineer** | 2023 – 2023

**Spotify API Pipeline** | MIDS Program Project | GitHub: <https://shorturl.at/znCtE>

Built a Spark pipeline from the Spotify API to Neo4J, elastic, and Hive. Performed executive analysis on playlists across countries around the world, identifying artists and songs most globally incorporated into popular playlists.

- *Tools Used:* Python, PySpark, Neo4J, Elastic/Kibana, Hive

**Education**

**Master of Science in Applied Data Science** - Syracuse University | Phi Kappa Phi Member | 2024

**Dual Masters of Arts in Theological Studies & Biblical Studies** - Reformed Theological Seminary | 2018

**Dual Bachelors of Science in Biology & Biochemistry** - West Texas A&M University | 2011