MI-RU YOUN

Boston, MA | 910-818-8585 | GitHub | LinkedIn | miruayoun@gmail.com

PROFESSIONAL SUMMARY

Aspiring Data Scientist with strong experience in Python, SQL, Tableau, and Power BI. Demonstrated ability to clean, analyze, and visualize data to generate actionable insights through hands-on projects. Proven track record in designing personalized learning plans and guiding data-driven initiatives, aligning with core analytical and modeling objectives.

EXPERIENCE

Data Science Tutor, Raleigh, NC — May 2022 – August 2025

- Tutored undergraduate and high school students in Python, R, SQL, statistics, linear algebra, and machine learning concepts, reinforcing theoretical knowledge through hands-on coding exercises.
- Designed personalized learning plans that improved student performance in calculus, probability, and data analysis, leading to measurable grade improvements.
- Guided students through end-to-end data science projects, from data cleaning and visualization to predictive modeling and evaluation.

PROJECTS

Multi-Agent Reinforcement Learning for StarCraft II, (Python) — Spring 2025

CDS DS 543 Introduction to Reinforcement Learning

- Modified and implemented a QMIX variant (RelaxedQMIX) to relax monotonicity constraints in value decomposition and improve agent coordination.
- Ran large-scale MARL experiments on SMAC, improving MMM2 win rate from 10% to 70% over QMIX while maintaining stable performance across maps.

Dark Matter Modeling with Graph Neural Networks, (Python) — Spring 2024

CDS DS 542 Deep Learning for Data Science

- Developed and trained a Graph Convolutional Network to predict astrophysical parameters from simulated stellar particle data, achieving an R^2 score up to 0.92 across predicted outputs.
- Met baseline regressors on 4 of 5 targets and visualized model performance through loss curves and prediction-vs-truth diagnostics.

GBH Bus Equity, (Python) — September 2024 - December 2024

- Analyzed MBTA bus ridership data to identify trends and insights by categorizing routes into local, express, and crosstown categories and calculating net ridership metrics.
- Developed visualizations to highlight insights, including next-bus wait times, lateness, demographics, and route performance, comparing data from 2019 to 2022.

BMW Price Analysis, (R) — Fall 2024

CAS MA 575

- Conducted comprehensive statistical analyses, including ANOVA and regression analysis, to evaluate factors influencing BMW pricing and identify significant predictors.
- Developed and tested multiple predictive models for BMW prices, utilizing 20+ factors and achieving an R^2 value of 74%.

TECHNICAL SKILLS

Programming & Languages: Python, R, Java, SQL (PostgreSQL, MySQL, SQLite), NoSQL (MongoDB, Cassandra), JavaScript, HTML/CSS, SAS
Machine Learning & AI: Machine Learning, Deep Learning, Reinforcement Learning, Predictive & Prescriptive Analytics, Statistical Programming
Frameworks: Scikit-Learn, TensorFlow/Keras, PyTorch,
Visualization & Statistics: Statistical Analysis & Modeling, Data Visualization (Matplotlib, Seaborn, Tableau, Power BI)
Tools & Platforms: Git, Jupyter Notebooks, Hadoop, Spark, AWS, Microsoft Azure, Linux, Excel
Data Management & Analytics: Data Wrangling, Data Mapping, Data Governance, Database Design & Querying

EDUCATION

Boston University, Boston, MA — Expected December 2025

Master of Science in Data Science

Relevant Coursework: Tools for Data Science, Linear Models, Introduction to Reinforcement Learning, Deep Learning for Data Science, Engineering for Big Data Workloads, Principles of Machine Learning

ADDITIONAL INFORMATION

Languages: English (native), Korean (intermediate)
U.S. Citizen, eligible to work without sponsorship