

MIJAIL Q. MARIANO

pronunciation: me-ha-L ma-ri-ah-no

pronouns: he/him/his

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Data Scientist with 8 years of managerial military experience, possessing a unique blend of technical and strategic expertise. Demonstrated work experience delivering quantifiable impact through data-driven solutions across public and creative industries. Proficiency in leading diverse teams and leveraging machine learning methods to design and communicate actionable insights to intricate business challenges.

SKILLS

Technologies: Python - Julia - SQL - Tableau - Apache Spark - Hadoop - JavaScript - HTML - Docker - Git - MLFlow

Libraries: Plotly - Seaborn - MySQL - Pandas - Scikit Learn - Numpy - Natural Language Toolkit

Machine Learning: Natural Language Processing - Clustering - Anomaly Detection - Classification - Regression - Time Series Analysis

PROJECTS

US College Majors Return on Investment *Machine Learning, Unsupervised Clustering*

Methods: SQL - Tableau - Git - Scikit Learn - Pandas - Numpy - Matplotlib - Seaborn - Markdown - Department of Education API

- o Sourced 250K+ unique Department of Education records from over 3000 US colleges to design an unsupervised machine learning model that predicts return-on-investment earnings of predominant college majors
- o Applied feature engineering techniques to create six (6) new ways of interpreting and improving the university and college major selection process for students and families

GitHub Metaverse Repository Web Scrape *NLP Multi-Classification Modeling*

Methods: Natural Language Toolkit - Docker - Extreme Gradient Boosting - BeautifulSoup Web Scrapping - JSON - Regular Expression

- o Acquired 250K+ GitHub README.md unstructured text data; applied computational linguistic-based rules to text mine and examine unique text patterns found metaverse related repositories
- o Built a multi-class machine learning classification model from observed text patterns capable of predicting future Metaverse repository primary coding languages with 56% greater overall accuracy than a baseline mode prediction

Codeup Online Curriculum Services *Time Series Analysis, Anomaly Detection*

Methods: SQL - Tableau - Git - Scikit Learn - Pandas - Matplotlib - Seaborn - Codeup LLC API

- o Identified and presented unique lesson and online activity trends in ~1mil online curriculum and IP address records
- o Created a comprehensive report with interactive visualizations using Tableau to enable swift detection of online fraudulent activity. Formulated and presented strategic recommendations to improve and safeguard the client's lesson planning

Social Mobility Impact on Employee Retention *Machine Learning, Classification Analysis*

Methods: Extreme Gradient Boosting - Scikit Learn - Plotly - Pandas - Matplotlib - Seaborn - JSON - Harvard Opportunity Atlas API

- o Measured and synthesized the impact of six (6) unique social-mobility factors on company-employee attrition
- o Adapted data labeling techniques to procured US Census socioeconomic data to predict employee turnover with 19% greater accuracy
- o Presented employers with key monitoring metrics of employee retention and actionable continuity risk interventions

Predicting and Preventing Customer Attrition in Telecommunication Services *Machine Learning, Classification Analysis*

Methods: MS Excel - Scikit Learn - Pandas - Numpy - Matplotlib - Seaborn - Markdown

- o Designed a Gradient Boosted ML classifier model to predict customer attrition with greater accuracy than a baseline rate by ~3%. Conducted exploratory data analysis to identify potential influencers of customer turnover and designed interventions to optimize monthly revenue by \$55K. Selected appropriate features for modeling, training, and tuning model performance using classification techniques, and evaluating its performance against the baseline accuracy rate

Architectural Design's Impact on Home Value: A Machine Learning Approach *Machine Learning, Unsupervised Clustering*

Methods: MS Excel - Principal Component Analysis - Scikit Learn - Scipy - Pandas - Numpy - Matplotlib - Seaborn - Markdown

- o Leveraged unsupervised machine learning clustering techniques to analyze home real-estate data and improve accuracy of home value predictions by 5%
- o Conducted a "build home-style" analysis to investigate differences in architectural styles across eras and their potential impact on home value. Elicited input from home sellers and buyers to feature engineer clusters of home characteristics and better capture the story of a home's value

EXPERIENCE

United States Army & National Guard

Engineer Officer

2013 - Present

Binghamton, NY

- US Army Corps of Engineers Officer and military veteran with eight years of strategic leadership experience in intelligence gathering, emergency response, human capital planning, and intergovernmental operations
- Professionally recognized results in building strong relationships and leading diverse teams in complex environments

FIRST Agency

People Operations Consultant

2021 - 2022

New York, NY

- Joined event marketing agency during a time of significant restructuring. Reduced the agency's 2022 operating costs from initial forecasts by 5% by accounting and centralizing direct and indirect company employee expenses and labor law obligations

Federal Reserve Bank of New York

Senior Analyst, Strategy Design

2016 - 2019

New York, NY

- Improved how central banking teams adapt and innovate in complex economic environments by designing and mobilizing 10+ interdisciplinary systems thinking training exercises. Recognized by Bank CEO for restructuring central banking analysis
- Accelerated new hires' time-to-productivity rate by 33%, measured by key role accomplishments and influence
- Facilitated strategic goal-setting and negotiated resources with a yearly budget of \$250K

EDUCATION

Johns Hopkins University

Master of Science in Computer Science

2023 - 2025

Codeup

Data Science, Certificate of Completion

2022

San Antonio, TX

Long Island University Post

Bachelor of Arts in Economics

2016

Brookville, NY