Joseph Reyes

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Summary: talented and ambitious graduate student with leadership experience and an impressive and unique skill set.

Education

University at Buffalo, Master of Science, Data Science, GPA: N/A, Aug. 2024–Dec. 2025

- **Coursework:** Database and Programming Fundamentals for Data Scientists, Data Models and Query Languages, Data Mining and Statistical Learning, Intro to Numerical Mathematics for Data Scientists, Intro to Probability Theory for Data Science, Applications of Data Science: Industry Overview

University at Buffalo, Master of Science, Computer Science and Engineering, GPA: 3.41, Received

- **Coursework:** Deep Learning, Advanced Machine Learning, Bayesian Non-parametric Machine Learning, Distributed Systems, Data Intensive Computing, Algorithm Analysis and Design, Computer Vision and Image Processing, Pattern Recognition, Intro to Machine Learning

University at Buffalo, Bachelor of Science, Aerospace Engineering, GPA: 3.55, Received

- **Leadership**: resident counselor for the University at Buffalo's Educational Opportunity Program
    - Served as a **role model** to students, led group activities, administered and enforced policies and procedures.
- **Awards**: Lester A. Gerhardt Memorial Scholarship, Dean's List, Magna Cum Laude

Extracurricular Activities: ACE Mentor Program under Columbia University's Manhattanville Development Group, thermodynamics grader for the University at Buffalo's Department of Mechanical and Aerospace Engineering

Professional Experience

The Research Foundation for SUNY

Research Analyst, Feb. 2024–Mar. 2024, remote

- Responsible for writing and presenting literature reviews on **inclusive artificial intelligence** and **natural language processing** research papers to the principal investigator of sponsored research projects.
- Areas I worked on are multilingual natural language processing, social bias in artificial intelligence systems (e.g., word embeddings) within the context of American society, and large language models.
- Comprehensively discussed a research paper's main technical and social science themes.

Skills

Languages: **fluent** in English and Spanish (listening, reading, speaking, writing)

Programming Languages: Python, R, SQL, MATLAB

Other: data structures & algorithms, Google Colab, Jupyter Notebooks, MySQL, SQLite, TensorFlow, Keras, NumPy, Pandas, Scikit-learn, Docker, Kafka, Zookeeper, Hadoop, OpenCV, Matplotlib, Excel, Word, Powerpoint

Activity 2024

- Developed **advanced** data structures, algorithms, Python, and SQL skills by reading textbooks and solving easy, medium, and hard practice problems on Leetcode.
- Developed the ability to implement machine learning algorithms, like k-means, from scratch using only NumPy (i.e., fancy indexing, boolean masking, broadcasting, etc.).

Natural Language Processing Projects

Spanish to English Neural Machine Translation

- Wrote a story in Dominican Spanish, and used a pretrained large language model from Hugging Face's transformers Python library to generate English translations in Google Colab.
- Leveraged my **Spanish and English fluency** to evaluate the quality of the model's translations, removing the need to calculate vague performance metrics and identifying recurring errors.
- Developed an understanding of how TensorFlow Hub and Keras can be used to customize and fine-tune large language models for improving performance (transfer learning).

Sentiment Classification of Movie Reviews

- Used classical data science techniques (e.g., decision trees) to analyze a movie reviews dataset and train a machine learning model capable of predicting a review's sentiment.
- Developed a strong understanding of Pandas, Scikit-learn, Keras, and Matplotlib, and used them to create data visualizations, construct data pipelines, perform hyperparameter tuning, and evaluate machine learning models.