

# Joe Mendez-Hughes

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## SUMMARY

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Artificial Intelligence/Machine Learning Engineer with 7 years of experience in designing and deploying advanced machine learning models, specializing in Natural Language Processing (NLP), Large Language Models (LLMs), and Generative AI. Skilled in Python and its associated libraries, with a track record of improving model performance and reducing training times. Passionate about leveraging AI to solve complex problems and advancing natural language understanding.

## PROFESSIONAL EXPERIENCE

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### SENIOR AI ENGINEER

**Dynamo Technologies, Washington, DC**

*September 2023 - May 2024*

- Designed and deployed an AI-driven reporting system using NLP techniques with RAGs and LLMs to extract insights from reports and unstructured data.
- Developed predictive analytics models using Python and machine learning techniques to forecast trend-based personnel deployment strategies.
- Engineered AI tools using PyTorch and data pipelines in pandas and NumPy to analyze complex health datasets at local and national levels.
- Refined AI reporting models through iterative machine learning processes using Python and scikit-learn to increase reporting accuracy by **35%**.
- Architected AI-driven analytics into the business intelligence platform, reducing manual reporting by **50%**.

### MACHINE LEARNING ENGINEER

**Deep Cloud IQ, New York, NY**

*July 2021 - September 2023*

- Engineered a robust sentiment analysis tracker, empowering administrators to detect early signs of disengagement or distress, allowing for timely interventions.
- Spearheaded the creation of a dynamic machine learning pipeline utilizing PyTorch and scikit-learn to analyze student performance data and provide targeted improvement strategies.
- Collaborated with Google engineers to design a scalable NLP pipeline using proprietary datasets.
- Created a suite of software that included chat applications, analytical tools, and administrative tools tuned with machine learning that offered an all-encompassing view of student health and behavior.

### SOFTWARE ENGINEER

**Millennial Shift Technologies, Phoenix, AZ**

*October 2020 - June 2021*

- Delivered complex integrations by developing and deploying SOAP and REST APIs.

### JUNIOR DATA SCIENTIST

**Prize Logic, Scottsdale, AZ**

*February 2018 - May 2020*

- Implemented data cleaning and preprocessing techniques, including handling missing data, outlier detection, and feature scaling, to ensure data integrity.
- Conducted exploratory data analysis (EDA) on large datasets to identify key trends, correlations, and patterns, contributing to data-driven decision-making.

## EDUCATION

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### Computer Science

College of Southern Nevada, Las Vegas, NV

*January 2014 - May 2017*

## SKILLS

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NLP, LLMs, RAGs, Python, Pandas, NumPy, scikit-learn, PyTorch, LangChain, APIs, Git, AWS, Azure