

Joe Mendez-Hughes

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SUMMARY

Artificial Intelligence / Machine Learning Engineer with over 9 years of experience in designing and deploying advanced machine learning models. Specializes in Natural Language Processing (NLP), Large Language Models (LLMs), and Generative AI. Proven track record of improving model performance by 35% and reducing training times by 20%. Passionate about AI, solving complex problems, and advancing natural language understanding.

PROFESSIONAL EXPERIENCE

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 personnel deployment trends.
- 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%**.
- Integrated 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 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 and LLMs with parameters exceeding 10 billion.
- Developed a suite of software—including chat applications, analytical tools, and administrative interfaces—enhanced with machine learning to offer a comprehensive 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 RESTful APIs, optimizing API performance and reducing response time by **30%**.

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.

EDUCATION

Computer Science

College of Southern Nevada, Las Vegas, NV

January 2014 - May 2017

SKILLS

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