JOSEPH MARTÍNEZ

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SKILLS

- Git/GitHub
- Machine Learning
  - RFC, SVM, XGBoost models
  - Clustering, PCA
- Python and R
- Data Visualization
  - matplotlib, R/ggplot2
  - Tableau, Excel
- Statistical Analysis
- Natural Language Processing
  - spaCy, sci-kit learn, LLM's APIs
  - Transformers, HuggingFace

WORK EXPERIENCE

Virginia Modeling, Analysis, & Simulation Center (VMASC)   Norfolk, VA
Graduate Research Assistant   Sep 2022 – Present

- Trained and fine-tuned NLP classification models (KNN, RFC, and BERT) to identify frustration.
- Conducted research on NLP to track the most efficient models and methods currently used.
- Applied statistical and analytical techniques for processing and analyzing extensive datasets.
- Maintained detailed documentation of models, methodologies, and results on GitHub repositories
- Collaborating with researchers, faculty, and industry professionals.

Old Dominion University   Norfolk, VA (Remote)
Project Consultant - NLP-based Social Media Data Analyst   Jul 2021 – Jan 2022

- Fine-tuned NLP classification models (spaCy, BERT, RoBERTa) with Python.
- Extracted, filtered, and cleaned 6.3M Tweets with Twitter's API and Python.
- Created engaging dashboards with Tableau to clearly represent migration data for the public.
- Collaborated with interdisciplinary team to enhance research outcomes.

Universidad del Norte   Barranquilla, Colombia
Researcher – Social Media Data Collection, Analysis, and Visualization   Nov 2020 – Jun 2021

- Gathered, filtered, and cleansed geo-tagged tweets on Venezuela-Colombia migration using Twitter's API and Python.
- Conducted Sentiment Analysis of Tweets to spot xenophobic/solidary trends over six years, employing a lexicon-based approach.
- Social Network Analysis (SNA) of tweets with Gephi. Transformed unstructured data into a network format, identifying influential users and organizations.
- Produced infographics, word clouds, line charts, and network visualizations for data-driven insights.
- Used IBM Watson's Natural Language Understanding (NLU) to semi-automate actor, factor, and mechanism identification from news articles.

EDUCATION

Old Dominion University
M.Sc. Modeling and Simulation Engineering
Aug 2022 – Sep 2024 (expected)

Correlation One
Data Science for All (DS4A Bootcamp)
Mar 2022 – Jul 2022

Universidad del Norte
B.Sc. Industrial Engineering
Jan 2017 – Mar 2022