

JOSEPH MARTÍNEZ SALCEDO

✉ Email: josephms957@gmail.com

☎ +1 (757) 987 4351

🌐 LinkedIn: www.linkedin.com/in/joseph-martinez-

📍 Address: Norfolk, VA




ABOUT ME

Modeling and Simulation master's Student at ODU. Honors Industrial Engineer with knowledge in statistics; Data Analysis with Python and R; Data visualization with Python, R, Shiny, and Tableau; Machine Learning models training and deployment; Natural Language Processing with Python (spaCy, sci-kit learn, Hugging Face Transformers); and Social Network Analysis with Gephi. High proficiency in programming and numerical computation.

DIGITAL SKILLS

- Python
- R & Shiny
- Gephi
- Tableau & Power BI

LANGUAGE SKILLS

-  Spanish - Native
-  English - B2
-  German – B1

WORK EXPERIENCE

Graduate Research Assistant

ODU Virginia Modeling, Analysis, & Simulation Center (VMASC)

[Sep 2022 – Present] · 10 mos

- Research: Conducting in-depth research on NLP, machine learning, data science, data analytics, data visualization, and Transformers. This involves literature reviews, data gathering, and analysis to advance knowledge in these areas.
- Data Analysis: Applying statistical and analytical techniques to process and analyze large datasets.
- Algorithm Development: Collaborating on developing and improving algorithms for NLP, ML, and data analysis. This includes designing novel approaches, optimizing existing models, and aligning algorithms with research objectives.
- Documentation: Maintaining detailed documentation of research methodologies, procedures, and results. This includes writing reports, papers, and documentation for internal and external dissemination.
- Collaboration: Collaborating with researchers, faculty, and industry professionals to exchange ideas, contribute to research objectives, and actively participate in meetings and discussions.

Project Consultant - NLP-based Social Media Data Analyst

Old Dominion University

[Jul 2021 – Jan 2022] · 7 mos

- Training Natural Language Processing (NLP) algorithms with python (spaCy and OpenAI models) to classify Colombian news according to the types of frustrations they have and assess different approaches with this algorithms to find the best for the task. With the purpose of semi-automatically identify the types of frustration the new articles have.

- Extracting, filtering, and cleaning social media data (from Twitter) related to migration flows from Venezuela to Colombia. 6.3M tweets were extracted with the platform's API.
- Creating engaging dashboards to present the information of the Venezuelan migration situation with a higher visual impact and easier understanding for the public.
- Collaborating with an interdisciplinary group of researchers exploring different perspectives of the used methods and results to complement one another's expertise and actively coordinate to work toward strong and integrative outcomes.

Researcher – Social Media Data Collection, Analysis, and Visualization

Universidad del Norte

[Nov 2020 – Jun 2021] · 7 mos

- Collecting, filtering, and cleaning social media data (from Twitter) related to migration flows from Venezuela to Colombia. I collected geo-tagged tweets, from 2015-2021, using the platform's API and cleaned and filtered them using Python.
- Analyzing twitter data using Social Network Analysis (SNA). I used Gephi to identify important users and media organizations that have a large influence in the network and drive the conversation about the migration situation
- Analyzing twitter data for sentiment to identify xenophobic/solidaric trends over the last six years about the migration situation using a lexicon-based approach.
- Generating rich visualizations using infographics, wordclouds, line charts, network and cooccurrence graphs to simplify information of complex topics and facilitate the understanding to a wider community.
- Semi-automate the identification of actors, factors, and mechanisms from news articles using Natural Language Processing (NLP). NLP facilitates the training of a corpus for relevant entities and relationships to the phenomenon of study.

EDUCATION

Master of Science | Modeling and Simulation Engineering

Old Dominion University [Aug 2022 – Dec 2024 (expected)]

Apprenticeship | Data Scientist

DS4A Correlation One [Mar 2022 – Jul 2022]

Bachelor's Degree | Industrial Engineering

Universidad del Norte [Jan 2017 – Mar 2022]

HONOURS AND AWARDS

Best overall institutional score in the Saber Pro 2021 test

Universidad del Norte · Nov 2022 [Nov 2022]

Undergraduate Honorable Mention

Universidad del Norte [Mar 2022]

- Mention given to the students with the highest grades in the major.

Andrés Bello Distinction

Colombian Ministry of Education [Nov 2016]

- Distinction to outstanding students in the ICFES Saber 11 State Exam in secondary school.