Juan Carlos Carrillo

Machine Learning Engineer

WORK EXPERIENCE

Valencian Research Institute for Artificial Intelligence, Valencia, ES
Research Engineer 12/2022 – Present

- Development of a chatbot using the RASA machine learning framework.
- Deploying a chatbot app on a virtual machine in Azure.
- Designing a recommendation system to recommend activities and tourist visits using models like S-BERT.
- Integration of a VRPTW planner into the recommender to provide a route for activities that take into account the schedule of points of interest and the duration of the activity.
- Setting up JupyterLab on an Ubuntu server for collaborative work in developing AI models and sharing result visualizations among colleagues.
- Researching different recommendation strategies.

PROJECTS

Group Recommendation System Using Spotify API 09/2021

- A group recommendation system that recommends items to a collective group of users, utilizing their individual playback histories to suggest songs that align with the group's musical tastes. This system leverages the preferences of each group member, incorporating their listening habits and preferences, to generate comprehensive recommendations that enhance the quality of the suggested content. My involvement in this project centred on music, where I designed and implemented a recommendation system that harnessed the Spotify API to curate playlists tailored to the musical preferences of a group of users, drawing insights from their playback history to optimize the recommendations for the entire group.

Cyber-Intelligence and Political Analysis Using Twitter for the May 2023 Electoral Elections 09/2023

- In May 2023, during the electoral elections in Spain, I undertook a project focused on utilizing Open-Source Intelligence (OSINT), specifically Twitter, to develop cyber-intelligence within the political domain. The project involved leveraging a combination of machine learning and social network analysis techniques to identify and study political communities and homophily. The project aimed to identify and assess the presence of bots within these communities, which sought to influence election campaigns. The project also involved quantifying echo chambers and conducting a discourse analysis to explore variations in opinions, such as those related to abortion, within these communities.

CONTACT

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SKILLS

Technical Skills:
- Model Selection
- Fine-tuning BERT models.
- Data Ingestion
- Natural Language Processing

Techniques:
- Social Network Analysis
- Topic Modelling
- Machine Learning Algorithms

Tools and Software:
- Scikit-Learn
- Neo4j
- Numpy
- Pandas
- PyTorch
- SciPy

EDUCATION

Valencia Polytechnic University.
Bachelor of Computer Science
Valencia, ES — 2018 - 2021

Awards: Pertaining to my final undergraduate project, I achieved an outstanding grade of 10/10.

Valencia Polytechnic University.
Master's Degree in Cybersecurity and Cyberintelligence
Valencia, ES — 2021 - 2023