Jesús Adrián Montesinos Correa

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Technical skills

→ `Python` (4 years) *I solve problems* in Project Euler y HackerRank. `Google Colab`, `Jupyter Notebooks`, *exploring* `MyST Markdown`
- *Data science* `Seaborn, Matplotlib, Pandas, NumPy, SymPy, Scikit-Learn, PyTorch`
- *Natural Language Processing* (1 year) `NLTK, torchText, contractions, DataLoader, DataSet` (PyTorch), `re, Fine-Tuning`

→ `Wolfram Language` (4 years)
- *Maths* and *Physics* problem solving. *Data science* Classification, prediction, and clustering
- *Natural Language Processing* (1 year) Text cleaning, stemming, entity extraction, pipelines, visualizations

→ LaTeX (4 years) Macros, tables, images, *AMS* packages, multi-file documents, Overleaf, LaTeX Beamer, BIBTeX

→ *Extra* `Markdown`, `Git` y `GitHub`, `Linux` terminal. *Learning* `SQL`, `Web scrapping`. **Wolfram** Wolfram Quantum Framework

Languages
- `English` B2 LEVEL
- `Russian` BASIC LEVEL (Self-Learning)

Technology Certifications
- `Wolfram University` *Maths* and *Programming*
- `HackerRank` *Python* and *Problem Solving*
- `Moscow Institute of Physics and Technology` Technical Writing

Soft skills:

→ Teamwork creating a safe environment so that colleagues can express their ideas without fear.
→ Being objective in receiving and giving feedback to create better products in the future
→ Critical thinking to understand the situation and give possible solution ideas to optimally solve the problem.
→ Write and express ideas clearly so that others understand the idea.

Experience and Leadership

○ MATH - **Expositor** diCu [Quantum Information Division] (September 4-6 2019) Topic *von Neumann entropy for an initial mixture of atomic field states in the Jaynes-Cummings model* visualized the behavior by plotting information from the mixture in `Mathematica`

○ DS/AI - **Hackathon** winner *Digital Age's Hackathon* (December 10-11 2019) Project `Questify`, a system for creating tests and their solutions from a given text using artificial intelligence in `Python`

○ BLOG - **Project** LaTeXteada (January 2021 - 2022) I wrote about useful commands to create intermediate-level notes, shared some tips to better understand how to use LaTeX and recommendations on how to use unusual commands, based on my experience.
   → I have the publication in 2nd place worldwide in a `Google` search (March 2023).

○ DS/AI - **Webinar** Visualización Datos y Geocomputación con el Wolfram Language (July 2022) Using `Wolfram Mathematica` I solved and graphed physics and math equations, with natural language input I obtained data from experiments and fit the results to known constants, used geocomputing to analyze distributions on maps and graphed the temperatures of Mexican beaches.

○ DS/AI - **Hackathon** winner AI Hackfest Hackathon (May 12-14 2023) Using `Python` we developed a web application that allows users to upload a PDF and ask queries to which answers will be provided along with the reference text using LLMs.

○ **Ideathon** Energy transition by MIT (29-30 May 2023) I learned to think design-based, to have clarity on what needs to be solved and that no idea is a bad idea. I improved my ability to work with multidisciplinary teams, systematically identify challenges and opportunities, and then start to generate a solution for the unknown.

○ DS/AI - **Conference** Wolfram Tech Conference (November 1-3 2023) Topic *Comparison of Papers of English and non-English speakers in Physics* where we obtained information and classified physics articles, cleaned and processed the text to obtain different components, created visualizations and made a classification algorithm with 85% accuracy.

○ DS/AI - **Hackathon** winner Solo Hacks 1.0 (Nov 18-19 2023) Using `Python` extracted the text from a PDF file, used a transformer to translate it from Spanish into English, and generated an MP3, and a PDF file with the text in Spanish and English.

○ DS/AI - **Conference** (*Spanish*) *Uso del modelo distilBERT para el reconocimiento de reseñas positivas y negivas en restaurantes* A conference in Instituto Mexicano del Petróleo (*Mexican Oil Institute*) We cleaned the data using `re` and with `PyTorch` (library of `Python`) created the `Dataset` and `DataLoader`, implemented the `distilBERT` model and classified the text with an accuracy of 97%

○ DS/AI - **Hackathon** winner HackMexico (April 13-14 2024) project Juchi where we develop a financial fraud detection (FFD), credit analysis with `Messenger chatbot`, and a house searching service based on the `Zillow's API`. For the FFD the punctuation and numbers were removed from the fraud-data with `re`. Using the `Tokenizer` from *HuggingFace* we fine-tuned the LLM `BERT` using `PyTorch` and `DataLoader` we got an accuracy of 97%

○ DS/AI - **Hackathon** winner HackMorelos13 (May 16–18 2024) project ExpoEtico an assistan to help you with your presentations correcting speech and posture errors using *CV* and *NLP*. For the text part I used `Python`. `pydub` and `speech_recognition` to convert from audio to speech. `Collections` to count the frequency of words. `Google Gemini Pro` our LLM model to get the synonyms suggestions, and to compare our speech with a prompt that we need to cover. `distilBERT` to classify the sentimets of our feedback

Communities

ESCOM-IPN Innovation Community (April - August 2020) Presented: `Git` y `GitHub`, FFT, and Wrote on Medium

Wolfram Student Ambassador (May 2022 - Actual) Using the Wolfram Language, share ideas, and improve my coding skills