Alejandro Maza Villalpando

Data Engineer

Profile

Experienced data engineer with a Master's in Computational Physics and a strong mathematical background. Proficient in Python, specializing in crafting efficient ETL pipelines for seamless data processing. Skilled in data analysis, and adept at unraveling insights from complex datasets. Successfully completed and deployed machine learning projects. Eager to contribute my analytical skills and technical background to advance data-driven decision-making.

Work experience

September 2023 ↑ August 2022

Data Engineer

Precure (Part-time)

- Established a CI/CD pipeline using Jenkins for streamlined project development and deployment.
- Developed a CNN system leveraging TensorFlow to detect and exclude noisy EMG signals.
- Configured and managed Linux servers for efficient data processing and analysis.
- Conducted a comparative analysis of EMG signals from different materials using Python and LaTeX, to improve material durability.
- Designed and implemented Docker images and containers for the ETL data processes, ensuring scalability and reproducibility.
- Ensured GDPR compliance by modifying segments of the ETL process using Python.
- Created data analytic dashboards using Power BI, providing insightful visualizations for finished project analysis.

August 2022 ↑ November 2020

Junior Data Engineer

Keller Willaims/Netguru

- Implemented alerting mechanisms for the ETL pipeline of the Keller Williams website using Python, enhancing real-time monitoring and issue identification.
- Resolved bugs in the ETL pipeline, employing a skill set that includes Python, AWS, Linux, and Oracle technologies.
- Conducted data mapping tasks in Oracle, ensuring seamless integration and accurate representation of data across the system.

August 2019 ↑ July 2018

Probe Physicist

Novosound (Part-time)

- Constructed and tested ultrasound probes using Novosound's innovative piezoelectric materials, contributing to the development of cutting-edge medical imaging devices.
- Modeled computer and mathematical ultrasound waves using Onscale, enhancing understanding and optimization of ultrasound-based systems.

Contact

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Linked in

Skills

- Python
- SQL
- Machine learning
- Data Engineer
- AWS
- Linux
- Docker
- Statistics

Languages

English	Fluent
Spanish	Fluent

Education

2023 ↑ 2021

MSc, Computational Physics

Copenhagen University

Courses:

- Applied statistics.
- High-performance parallel computing.
- Inverse problems.
- Scientific computing.

Projects:

- Master thesis: "Machine Learning Methods for Predicting Stellar Parameters in Realistic Molecular Cloud Environments".
- Block project: "Track Reconstruction with GNN and CNN".

2019 ↑ 2015

BSc, Physics

University of the West of Scotland

Courses:

- Complex analysis.
- Statistical mechanics.
- Partial differential equations.

About me

I am a curious person with a diverse set of hobbies, including yoga, salsa dancing, and rock climbing, reflecting my passion for both physical and mental well-being. Beyond these pursuits, I am an avid learner and voracious reader, finding joy in expanding my knowledge. Traveling and immersing myself in different cultures have been integral to my life, I have spent the last 11 years residing in various European cities, including London, Glasgow, Krakow, and Copenhagen. This journey has not only broadened my perspectives but has also enriched my adaptability and appreciation for diversity.