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Hello! I am a mathematical engineer working in the data science industry with experience in various areas such as marketing, finance, and climate.

I have expertise in the entire data science workflow, from initial data extraction to making final decisions based on advanced models and optimization techniques. The variety of tools I utilize spans across a wide range, including Python, SQL, Dash, Excel, Pytorch and Docker, among others.

I am passionate about the world of data and being an active member of this large and expanding community. **Check out my webpage for an interactive experience**: **https://mrvgme.github.io**

Professional Experience

Climate Data Scientist at Arfima Financial Solutions (AFS)

June, 2023 - June, 2024

- Search for hazard and damage data to conduct a physical risk assessment. Compile a catalog using Google and Excel.
- Transform data sources from various map formats (such as tif, nc, ...) and geocoordinate systems to a standardized predefined format using Python.
- Onboard new data to S3 storage (Minio and AWS) using Python.
- Develop vulnerability models to evaluate physical risk for different types of assets and hazards based on research papers. Utilize Python and Probability.
- Implement physical risk assessment for assets in Spain using the Climada library with Python.
- Contribute to the OS-Climate hazard and physrisk GitHub repositories by forking them and submitting merge requests.
- Deploy the OS-Climate physrisk User Interface (UI) using mapbox and API, utilizing Python and React.
- Implement risk metrics for different hazards based on percentiles and central bank reports using Python.
- Develop dashboards for physrisk analysis using Grafana and SQL.
- Deploy the entire OS-Climate physrisk infrastructure and integrate custom code as required using Python.

Financial Data Scientist at Arfima Trading

Sep, 2019 - Jun, 2023

- Collect data through public and private APIs as well as web scraping using Python.
- Parse and transform data in various formats (PDF, Excel, JSON, XML...) and update databases accordingly using Python.
- Develop pipelines to schedule database updates: downloading, transforming, inserting, logging, and reporting using Airflow and Python.
- Retrieve data from databases using SQL and Python.
- Visualize data using Matplotlib and Plotly in Python.
- Build interactive dashboards using Grafana and Dash in Python.
- Make numerical and categorical predictions using scikit-learn, Pytorch, Tensorflow, and pre-trained models in Python.

- Optimization based on model predictions and limited resources, enhancing decision-making utilizing Python and Mathematics.
- Create reports using Microsoft Excel, PowerPoint, and LaTeX.
- Build Docker images and deploy them.

Marketing Business Analyst Internship at Bankia

Jan, 2019 - Jun, 2019

- A thorough understanding of the specific requirements and demands of the business.
- Data extraction and task scheduling using SQL and Hive.
- Propensity modeling to identify the ideal clients for a marketing campaign using scikit-learn and Python.
- Create reports with Microsoft Office Package.
- Monitoring and analyzing the performance of deployed models to enhance the modeling cycle through the utilization of Python and Excel.

Education

Deep Learning Nanodegree at Udacity

2021

This Nanodegree trains the learner about foundational topics in the exciting field of deep learning, the technology behind state-of-the-art artificial intelligence: convolutional neural networks (CNNs), recursive neural networks (RNNs), transformers and generative adversarial networks (GANs).

Machine Learning Engineer Nanodegree at Udacity

2021

This Nanodegree focuses on the latest best practices and capabilities that are enabled by Amazon SageMaker, including new model design/deployment features and case studies in which they can be applied to, like computer vision and natural language processing, building machine learning workflows.

Mathematical Engineering Degree at Universidad Complutense de Madrid (UCM)

2019

This university degree provides graduates with the ability to understand and develop a strong mathematical formalism applied to solve real-world problems, utilizing powerful tools such as probability theory, statistics, optimization, and programming.

Big And Open Data Summer Course at Universidad Complutense de Madrid (UCM)

2017

The course provides with the principles of big and open data, as well as data processing techniques and real world examples explained by business experts.

Skills

Programming: Python, SQL, R, Matlab, C++.

Dashboards and Workflows: Dash, Grafana, Docker, Airflow, Cloud Computing, S3, Minio and AWS.

Reporting: Microsoft Excel, Power Point and Outlook.

Machine Learning: Pytorch and Tensorflow.

Big Data: Spark