MARIO BURBANO

Cloud Data Engineer and Analyst

Date of birth **14 November 1984** Nationality **Irish/Colombian** **Antony, FRANCE**
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in **burbanom**

PhD in Computational Chemistry with extensive experience in cloud computing, task automation and data analysis. I am passionate about the implementation of data pipelines and how they can facilitate the process of data-driven decision-making.

PROFESSIONAL EXPERIENCE

Data Engineer

Devoteam/Ysance

2021 – Ongoing Île de France, France

- **L'Oréal** As part of one of the IT/BI teams within the R&D deparment, I participated in a project whose aim was to migrate the existing data pipelines from a Talend/Hadoop environement towards an Airflow/GCP solution.

Data Engineer/Scientist and instructor

Lincoln/Alten

2019 – 2020 Île de France, France

- **Malakoff Humanis** As part of the team in charge of the data infrastructure, I developed a series of scipts aimed at analyzing the data required for the successful migration of the company's machine learning projects developed on Dataiku DSS. These models relied on data hosted on-premise which was to be moved to the AWS cloud.
- **Orange** I integrated the General Public Marketing team in order to migrate the existing SAS datamarts to Dataiku DSS. I also provided several teams with training for this new tool.

Data Engineer/Analyst

Altran

2018 – 2019 Île de France, France

- **Essilor** As a member of the team tasked with implementing and maintaining the software used internally for optical calculations, I participated in the push towards the creation of a data infrastructure on the cloud AWS. The aim was to be able to exploit the data by making it available to the data science and R&D teams. I also contributed to the team by automating the analysis of regression tests by developing a series of pyhon scripts which accelerated the team's ability to respond to software bugs.

Research Engineer

CEA

2016 – 2018 Saclay, France

- I carried out refactoring and modularisation of an electrochemistry modelling program used to perform Molecular Dynamics simulations of *supercapacitors* at constant potential.
- I implemented a new method for solving electrostatic equations, which was then made available as a stand-alone Fortran library.

SKILLS

Numerical Simulation ●●●●●

Cloud Computing ●●●●○

High Performance Computing ●●●●●

Mathematics/Statistics ●●●○○

Data Visualization ●●●○○

Computer science

Python ●●●●●
SQL ●●●●○
Linux/Unix/Bash ●●●●○
Machine Learning ●●●○○
git ●●●○○
Docker ●●○○○

AWS · GCP · Dataiku DSS · SAS · Talend · pandas · Plotly/Dash · scikit-learn · Flask · Visual Studio Code · Statistical Analysis · Fortran · LaTeX · Parallel computing · Jupyter

Cloud Services

BigQuery · Airflow · PubSub · AWS EC2 · AWS Lambda · Athena

LANGUAGES

- Spanish – Native language
- English – Native level
- French – Advanced level

EDUCATION

Ph.D. in Computational Chemistry

2009 – 2014 Trinity College Dublin

B.A. in Computational Chemistry

2004 – 2009 Trinity College Dublin

PROFESSIONAL EXPERIENCE – CONT.

Postdoctoral researcher

UPMC

2014 – 2016 Paris, France

- Using Python, I fitted models to study correlated motion in battery components.
- I established procedures to generate/analyse large quantities of data used to explain materials' properties using Fortran/Python.

Ph.D. in Computational Chemistry

Trinity College Dublin

2009 – 2013 Dublin, Ireland

Computer modelling of metal oxides

- I performed molecular simulations of materials for energy production and storage
- Using theoretical predictions, I helped dispell misconceptions regarding the roles of impurities and morphology as possible enhancers of desired qualities in materials used to generate energy.
- I used Fortran/MPI to write simulation and data analysis programs

12 peer-reviewed articles, h-*index* 11, 577 citations

HOBBIES

Hiking | Cycling | Canine activities | Gardening