

Alexandre P. Furlan

Data Engineer

WORK HISTORY AND EXPERIENCE

A3Data Consulting - Data Engineer

SINCE NOVEMBER 2021

I've worked implementing a cloud-based architecture of project. I implemented infrastructure as code by using Terraform in AWS. Different AWS services were used in this project, data lakes (S3), Kubernetes cluster (EKS), Virtual Private Cloud (VPC), Elastic Map-Reduce (EMR) and others. Airflow was used to orchestrate the pipeline and argoCD to manage the applications in Kubernetes cluster. The Gitlab CI was used to deploy.

Main technologies used :

- AWS
 - EKS
 - EMR
 - EC2
 - S3
 - IAM
- Airflow
- ArgoCD
- Spark
- Terraform
- Gitlab CI

A3Data Consulting - Data Analyst

FROM APRIL 2021 TO NOVEMBER 2021 (8 months)

I've worked developing Power BI panels for the finance department of a brazilian food industry. I general the panels showed budgeted-paid analysis. For some cases a statistical quantitides like a standard deviation and confidence interval were studied.

Main technologies used :

- SQL
- PowerBI
- DAX
- Python
- AWS

Universidade Federal de Minas Gerais - Postdoctoral Research Scientist

FROM APRIL 2017 TO APRIL 2021 (4 years)

I've worked with Monte Carlo simulations focused Phase Transitions and Critical Phenomena. I developed C/C++ algorithms to study distinct simplified statistical models. Visit [Sci. Publications](#) page for more details.

Main technologies used :

- Fortran
- C/C++
- Python
 - Numpy
 - Matplotlib
 - Scipy
 - Pandas
- Bash
- Linux

Other :

- Mathematical modeling
- Computational Physics
- Monte Carlo Simulations
- Percolation
- Phase transitions

EDUCATION

2005-2010 - B.Sc. in Physics, Department of Physics, Universidade Federal do Paraná.

2011-2013 - M.Sc. in Physics, Physics Institute, Universidade Federal do Rio Grande do Sul.

2013-2017 - Doctoral degree in Science, Physics Institute, Universidade Federal do Rio Grande do Sul.

Collaboration : From 01/2016 to 08/2016 I studied at the group Institute of Physical Chemistry "Rocasolano" at Consejo Superior de Investigaciones Científicas - Madrid - ES.

LANGUAGES

- **Portuguese** - native speaker
- **English** - Intermediate knowledge
- **Spanish** - Basic knowledge