



## Alvaro Diego

Data Scientist

### Programming

Python	5+ yrs.
SQL	3+ yrs.
C, C++	10+ yrs.
Java, C#	5+ yrs.

### Technologies

Jupyter	2+ yrs.
Excel	10+ yrs.
Dash, Plotly	1 yrs.
Power BI	1 yrs.
Git	3+ yrs.

### Skills

Mathematics	10+ yrs.
Statistics	10+ yrs.
Physics	10+ yrs.
Machine Learning	5+ yrs.

### Languages

Portuguese	
English	
German	
French	

## About

I am a data scientist with background on experimental physicist with a large experience in data treatment and data analysis on complex problems. Currently my projects involve employing machine learning and statistical methods in the field of data science applied to business solutions and project finance.

I am fluent in several programming languages including Python, SQL, C++ and Java. During my 10+ years of experience, I employed programming skills to build automation processes, advanced mathematical models and data analysis using machine learning methods.

At the moment I'm improving my data display skills for business intelligence with technologies like Power BI, JavaScript, Dash and Plotly.

## Experience

### Self employed

2021 - Today

Data Scientist consultant

- Exploratory data analysis.
- Implementation of machine learning methods for business.
- Creating dashboards for data reporting and forecasting for business decisions.

### Paternity leave

2020 - 2021

Full time father

- Caring for my son in the hope of a better world.

### PhD Researcher

2017 - 2019

Universidade de Brasilia, Brasilia, Brazil

- Spearheading of scientific projects related to manufacture of organic solar cells.
- Software engineering in data acquisition automation.
- Acquisition and analysis of performance data of the organic solar cells response.
- Optimization of procedures for manufacturing quantum devices.

### Project Manager

2017 - 2018

NowGo Energy, Brasilia, Brazil

- Team leader of projects related to the feasibility study and installation of solar power plants.
- Project finance of the feasibility of the power plant.
- Performance simulation and capacity factor.
- Simulation of company structure and business risks.
- Business intelligence.
- Costs, revenues and taxation.

### PhD Researcher

2014 - 2016

Alcatel Thales III-V Lab, Alcatel, Paris, France

- Spearheading of scientific projects related to the manufacture of devices for world wide communication.
- Manufacture of lasers and optical modulators.
- Mathematical and statistical modeling.
- Exploratory data analysis from experimental data from several sources.

## Contact

- ☎ +55 61 998 638 554
- ✉ alvarodiego@gmail.com
- 🏠 alvarodiegomaia.github.io
- 🌐 github.com/alvarodiegomaia
- in alvarodiego
- 📍 Brasilia, DF, Brazil

### PhD Researcher

2014 - 2016

Sorbonne Université Campus Pierre et Marie Curie,  
Paris, France

- Spearheading of scientific projects related to the mathematical modeling of the manufacture of lasers and optical modulators.
- Acquisition and analysis of performance data of lasers and optical modulators.
- Optimization of procedures for manufacturing quantum devices.
- Software development.

### PhD Researcher

2013 - 2014

Pontifícia Universidade Católica do Rio de Janeiro,  
PUC-Rio, Rio De Janeiro, Brazil

- Spearheading of scientific projects related to the manufacture of quantum devices.
- Mathematical and statistical modeling of the device performance.
- Exploratory data analysis from several source of formats of data.
- Software engineering in data acquisition automation.

## Education

### PhD in physics

2007 - 2012

Universidade de São Paulo, USP, São Paulo, Brazil

**Relevant Coursework:** Quantum devices fabrication, Software engineering, Systems automation, Data Acquisition, Data analysis, Software Development, Physics, Math, Statistics.

### Master's degree in physics

2005 - 2007

Universidade de São Paulo, USP, São Paulo, Brazil

**Relevant Coursework:** Data Acquisition, Data analysis, Software Development, Physics, Math, Statistics.

### Undergraduate Physics

2001 - 2005

University of Brasilia, Brasilia University, Brasilia,  
Brazil

**Relevant Coursework:** Data Acquisition, Data analysis, Software Development, Physics, Math, Statistics.

## Projects

### Data Scientist and Machine learning

2020 - Today

- Creation and implementation of Machine Learning models.
- Developing visualization dashboards for data reporting.

### Gaming

2015 - Today

- Creating devices for sim racing.
- Arcade machine cabinets for fighting game community.
- X-input pinball controller with motion control.