



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 as an experimental physicist and extensive experience in data treatment and data analysis applied to complex research. My current projects are aimed to the field of data science employing machine learning and statistical methods, that can be useful for scientific investigation, 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
- 🎓 scholar.google.com
- 📍 Brasilia, DF, Brazil

PhD Researcher

Sorbonne Université Campus Pierre et Marie Curie,
Paris, France

2014 - 2016

- 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

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

2013 - 2014

- 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

Universidade de São Paulo, USP, São Paulo, Brazil

Title: Growth, fabrication and test of quantum dots infrared photodetectors.

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

2007 - 2012

Master's degree in physics

Universidade de São Paulo, USP, São Paulo, Brazil

Title: Spin Effects in Wide Quantum Well.

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

2005 - 2007

Undergraduate Physics

University of Brasilia, Brasilia University, Brasilia,
Brazil

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

2001 - 2005

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.