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 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

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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
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.

Master's degree in physics | 2005 - 2007

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.

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.

Brasilia, 10th November 2022

Alvaro Diego Maia

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