

# Adelo Vieira, Data Scientist

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LinkedIn GitHub

ENGLISH: Fluent

FRENCH: Fluent

SPANISH: Native

PORTUGUESE: Intermediate

[Click here for an extensive online version](#)

BSc. (Hons) in Information Technology. I'm also a Geophysical Engineer and MSc in Earth sciences with strong mathematical, problem-solving, and analytical skills. I'm particularly interested in Data Analytics and Software Development.

Proficient in multiple programming languages, including Python, Java, JavaScript, SQL, and R. I have a huge interest in Machine Learning and Text Analytics. I've been recently working in areas such as Natural Language Processing and Sentiment Analysis. I have solid knowledge in Naive Bayes, Decision Trees, K-Nearest Neighbour, and experience working with Python (Pandas, NLPTK, Scikit-learn, TextBlob, Vader Sentiment), R and RapidMiner.

I also have a solid academic experience in Object-oriented programming and Web Development. I have developed several academic projects using Java, React, Node.js (Express.js), and Dash.

Advanced experience with the most popular flavors of Linux and excellent academic background in Databases (SQL) and cloud computing using AWS and Google Cloud.

## Skills and Qualifications

| Software Development  | Data Science  | Other qualifications  |
|---|---|---|
| <ul style="list-style-type: none"><li>◆ Some of the languages I've worked with<ul style="list-style-type: none"><li>• Python, Java</li><li>• JavaScript, HTML, CSS</li><li>• SQL, Shell scripting, R, PHP, C, L<sup>A</sup>T<sub>E</sub>X</li></ul></li><li>◆ Object-Oriented Concepts and Constructs<ul style="list-style-type: none"><li>• SOLID Principles, Fundamental OOP concepts</li><li>• Nested classes, Upcasting - Downcasting</li><li>• <b>Object Orientation with Design Patterns</b></li></ul></li><li>◆ Data Structures &amp; Algorithms</li><li>◆ Web Development<ul style="list-style-type: none"><li>• React, Node.js (Express.js), Dash - Plotly, Ruby on Rails</li></ul></li><li>◆ Mobile Development<ul style="list-style-type: none"><li>• Cordova - PhoneGap</li><li>• Ionic - Capacitor</li></ul></li></ul> | <ul style="list-style-type: none"><li>◆ Descriptive Data Analysis</li><li>◆ Correlation &amp; Simple and Multiple Regression</li><li>◆ Naive Bayes, Decision Trees, K-Nearest Neighbour</li><li>◆ Association Rules, Clustering, Time Series Analysis</li><li>◆ Model Evaluation</li><li>◆ Text Analytics<ul style="list-style-type: none"><li>• Information Retrieval</li><li>• Natural Language Processing</li></ul></li><li>◆ Python for Data Science<ul style="list-style-type: none"><li>• NumPy, Pandas, NLPTK, TextBlob, Vader Sentiment, Scikit-learn</li><li>• Data Visualization, Dash - Plotly</li><li>• Scrapy</li></ul></li><li>◆ R, RapidMiner, Jupyter</li></ul> | <ul style="list-style-type: none"><li>◆ <b>Databases</b><ul style="list-style-type: none"><li>• Database design:<ul style="list-style-type: none"><li>* Entity relationship modelling &amp; The Enhanced Entity-Relation Model</li><li>* Relational Model, Normalisation</li></ul></li><li>• RDBMS<ul style="list-style-type: none"><li>* MySQL: Stored Procedures, Triggers, Events, Cursors, Transactions, Exception Handling</li><li>* PostgreSQL</li></ul></li><li>• GUI DB administration tools<ul style="list-style-type: none"><li>* MySQL Workbench, PhpMyAdmin, SQLLectro</li></ul></li></ul></li><li>◆ <b>Cloud Computing</b><ul style="list-style-type: none"><li>• AWS, Google Cloud</li></ul></li><li>◆ <b>Networking</b><ul style="list-style-type: none"><li>• Network Simulation using PacketTracer</li></ul></li></ul> |

## Work experience

Present



2017

### IDG Direct, Ireland

#### *Business Development Executive*

This is a pre-sales role. I represent IDG services by making professional outgoing calls to prospective clients. I have to establish and maintain a professional conversation with IT Managers to identify their needs and next investments. The gathered information is required from our clients (Largest Tech Companies) and used in the next step of the sales process.

- My responsibilities include: Lead Generations, Gathering client details and Maintaining/Updating IDG database with accurate client details.
- I work in different markets and contact clients in French, English and Spanish: France, Belgium, Luxembourg, Spain, Middle East and Africa.
- In this position, I have improved my communication skills in French and English. I have learned how to build and maintain a professional relationship with clients and improved my Active Listening Skills.
- At IDG, I have completed a Certified Sales training. This course addressed the most important aspects of the sales process.

2014

**WikiVox, France*****Web Programmer***

I was responsible for the installation and administration of a Wiki Web Application based on the MediaWiki engine.

- Extensive experience with the MediaWiki Engine:
  - \* Configuration of a Multilingual Wiki. User access levels configuration.
  - \* Implementation of different CAPTCHA methods. Implementation of a payment gateway. Page categorization.
  - \* Take a look at my personal Wiki: [http://perso.sinfronteras.ws/index.php/Computer\\_Science\\_and\\_IT](http://perso.sinfronteras.ws/index.php/Computer_Science_and_IT)
- Administration of a Linux Server:
  - \* Installation and configuration of a LAMP stack: Apache, MySQL, PHP.
- Database management: MySQL, PhpMyAdmin.

2012

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2011

**Simón Bolívar University - Funides USB, Venezuela*****Research geophysicist of the Parallel and Distributed Systems Group (GRyDs)***

[Click here to see some examples of my work in Seismic modelling.](#)

As a Research Geophysicist I was responsible of ensuring the correct integration and implementation of geophysical applications into a computer cluster platform. This platform was being designed in order to facilitate task scheduling and run computation intensive tasks on clusters. One of my main activities was shell script programming for Seismic Modeling and Processing.

- My responsibilities include:
  - \* Shell script / MATLAB programming for seismic data processing and modeling.
  - \* Task automation using Shell scripting.
  - \* Simulations of seismic waves propagation: Wavefront and ray tracing.
  - \* Generation of pre-stacked synthetic seismic data using wave propagation theories (raytracing and finite difference methods).
  - \* 2D/3D Seismic data processing.

2011

↑

2010

**CGGVeritas, Venezuela*****Seismic data processing analyst***

- Demultiplexing, Reformatting (SEG -Y/SEG -D).
- Seismic data edition: Searchin for noisy, monofrequency and incorrect polarities traces.
- Geometrical spreading correction. Set-up of field geometry. Geometry QC.
- Application of field statics corrections, Deconvolution, trace balancing.
- CMP sorting, Velocity analysis, Residual statics corrections.
- NMO Correction, Muting, Stacking, Filtering. Filtering: Time-variant, band-pass.
- Post-stack/Pre-stack time and depth migration.

2010

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2008

**Simón Bolívar University, Venezuela*****Academic Assistant - Earth Sciences Department***

As a Academic Assistant, I was in charge of collaborating with the lecture by teaching some modules of the Geophysical Engineering program at Simón Bolívar University. I was usually in charge of a group between 20 and 30 students during theoretical and practical activities.

- This experience has contributed to my professional development in two major areas:
  - \* By teaching modules, I have solidified many technical geophysical knowledge.
  - \* I have also developed communication and presentation skills, as well as the leadership strategies needed to manage a group of students and to transfer knowledge effectively.
- Courses taught:
  - \* Seismic data processing: Concepts of discrete signal analysis, sampling, aliasing and discrete Fourier transform. Conventional seismic data processing sequence.
  - \* Seismic methods: The convolutional model of the seismic trace. Propagation and attenuation of seismic waves. Interpretation of seismic sections.
  - \* Seismic reservoir characterization: Relations between the acoustic impedance and the petrophysical parameters. Well-Seismic Ties. Seismic inversion and AVO.

**Education**

2020

**College of Computing Technology (CCT), Ireland*****Diploma in Predictive Data Analytics***

- Project: Evaluating the Performance of Lexicon-based and Machine Learning Sentiment Analysis for Amazon reviews classification.

2020

## College of Computing Technology (CCT), Ireland

### *Bachelor of Science (BSc) (Honours) in Information Technology*

- Final year project: Developing a Web Dashboard for analyzing Amazon's Laptop sales data.  
To know more about this project, visit [Developing a Web Dashboard for analyzing Amazon's Laptop sales data](#)

2019

## College of Computing Technology (CCT), Ireland

### *Bachelor of Science (BSc) in Information Technology*

- Final year project: Supervised Machine Learning Models for Fake News Detection.  
To know more about this project, visit [Supervised\\_Machine\\_Learning\\_for\\_Fake\\_News\\_Detection](#)

2014

## Claude Bernard Lyon 1 University, France

### *Master – Complementary computer studies*

- Specialty: Distributed information systems and networks.
- Final year study project: Design and Administration of a Wiki Web Application.

2011

## Simón Bolívar University, Venezuela

### *MSc in Earth sciences*

- Specialty: Applied Petroleum Geoscience.
- Master thesis project (Excellence Honor Mention): Study of Pull up/Push down effects through seismic modelling, colombian plains.

2007

## Simón Bolívar University, Venezuela

### *Geophysical Engineer*

- Bachelor thesis project: Basic modelling of pre-stacked seismic data and its corresponding processing sequence, using Seismic Unix package.

## My projects portfolio

- ♦ **Developing a Web Dashboard for analyzing Amazon's Laptop sales data** [\[Project page\]](#)
  - Try the App at <http://dashboard.sinfronteras.ws>
  - Github repository: <https://github.com/adeloaleman/AmazonLaptopsDashboard>
  - A demo video is available at <https://www.youtube.com/watch?v=WrvEoA9DD4g>
- ♦ **Supervised Machine Learning for Fake News Detection** [\[Project page\]](#)
  - <http://fakenewsdetector.sinfronteras.ws>: This is the link to a Web Application that has been created to easily interact with the Machine Learning Models created. It allows us to determine if a News Article is Fake or Reliable by entering the text into an input field. The input text will be processed by the Machine Learning Models at the back-end and the result will be sent back to the client. This Web App was created using Shiny, an R package that can be used to build interactive web apps straight from R.
  - <https://github.com/adeloaleman/RFakeNewsDetector>: This is the link to a Github repository that contains a R Library we have created to package the Machine Learning Models built. This package contains essentially three functions: `modelNB()`, `modelSVM()` and `modelXGBoost()`. These functions take a news article as argument and, using the Models created, return the authenticity tag («fake (1)» or «reliable (0)»).
- ♦ **Social Media Sentiment Analysis using Twitter Data** [\[Project page\]](#)
- ♦ **Java Desktop App - Zoo Management System** [\[Project page\]](#)

In this project, we have created a GUI Java (Swing) Application for a Zoo Management System.

  - You can try the application by downloading the Java Jar file from this link: [ZooManagementSystem.jar](#)
  - Github repository: [github.com/adeloaleman/JavaDesktopApp-ZooManagementSystem](https://github.com/adeloaleman/JavaDesktopApp-ZooManagementSystem)
- ♦ **Java Desktop App - Stock Market Simulator** [\[Project page\]](#)

In this project, we have created a GUI Java (Swing) Application that simulates a trading day of a simplified model of a stock market.

  - You can try the application by downloading the Java Jar file from this link: [SMSimulator.jar](#)
  - Github repository: [github.com/adeloaleman/JavaDesktopApp-StockMarketSimulator](https://github.com/adeloaleman/JavaDesktopApp-StockMarketSimulator)

- ♦ **Web App - Clone of Twitter** <sup>[Project page]</sup>
  - Visit the Web App at <http://62.171.143.243>
  - Github repository: <https://github.com/adeloaleman/WebApp-CloneOfTwitter>
  - This Application was developed using:
    - \* Back-end: Node.js (Express) (TypeScript)
    - \* Front-end: React (TypeScript)
- ♦ **Automatic backup in the cloud using shell scripting** <sup>[Project page]</sup>
- ♦ **Seismic Wave Propagation Modelling** <sup>[Project page]</sup>

## Papers and Publications

- ♦ **Adelo Vieira and Crelia Padrón.**  
Analysis of pull up effects through computational seismic data modeling and depth migration, Colombian plains. [↓Download](#)
- ♦ **Alejandro Gutiérrez, Evert Durán, Adelo Vieira and Crelia Padrón.**  
Estimation and modelling of reservoirs properties through seismic attributes and geo-statistics in gas fields, southern Spain. SOVG, XIV Venezuelan Geophysics Congress, 2008. [↓Download](#)

## Interests and other activities

- ♦ **Member of the water polo team at Simón Bolívar University:** Attendance at 5 National University Games.
- ♦ Swimming instructor at U.E.U.S.B school.
- ♦ Open-source software.
- ♦ Travel, Volleyball, Open-Water Swimming.