

Mr MARÍA DIZ Álvaro

Project Manager Data Analysis

PROFILE

Main Positions/Companies

- ▶ **TOYOTA (AKKA consultant)/** R&D Engineer. Data Scientist in connected Powertrain team. Installation of **multimedia components** in cooperation with different departments. *2 year 7 months*
- ▶ **AKKA/** Digital consultant. Research in **Industry 4.0** technologies. Provide support for the digital transformation at company level. *7 months*
- ▶ **GKN Driveline/** Digital Transformation Project Manager. **Digitalization/Data Science /Robotics/ ETL/ IOT** (*Industry 4.0 department*). Development of an autonomous manufacturing unit cell. *1 year*
- ▶ **CTAG/** Industrial engineer specializing in composite and bio-composite materials. *6 months*
- ▶ **DINAK/** Industrial management engineer. **LEAN** manufacturing. *4 months*

Key competences

▶ Data science	Python, Excel	(3,5 yr)	R, SAS	(1 yr)
	Oracle, SQL	(1,5 yr)	Azure, AWS, GCP	(4 mos)
▶ Data visualization	QlikView, Tableau, PowerBI	(1,5yr)	Streamlit	(9 mos)
	Plotly	(6 mos)		
▶ Machine Learning	Scikit-Learn	(2 yr)	TensorFlow (DL)	(1 yr)
	NLP	(1 yr)		
▶ Big Data	Hadoop	(4 mos)	PySpark	(4 mos)
▶ Project management:	Agile, SCRUM	(2,5 yr)	Microsoft Planner	(9 mos)
▶ Industry 4.0:	Computer vision	(6 mos)	Traceability	(6 mos)
	Automation and Robotics	(1 yr)	IOT	(1 yr)
▶ Other tools:	MS Office 365	(4 yr)	ERP (Odoo)	(1 yr)
	SharePoint and Teams	(2,5 yr)	JAVA and Android	(6 mos)
	MATLAB and Simulink	(1 yr)		

Languages

▶ Spanish	Mother tongue
▶ Galician	Mother tongue
▶ English	Advance
▶ French	Intermediate
▶ Dutch	Beginner

EDUCATION - TRAININGS & CERTIFICATES

Certified Associate in Project Management (CAPM)®

Project Management Institute 2023

MSc in Data Sciences at KSchool

KSchool (*Madrid*) 2021

- ▶ **Data hacking** with **Python** and **R**. **Machine Learning**, **Deep Learning**, Natural Language Processing.
- ▶ **Big Data** with **Spark** on **AWS & GCP**.
- ▶ Relational databases (**SQL**) with **PostgreSQL**. Non-relational (NoSQL) with MongoDB.
- ▶ Visualization with **Tableau**.

Learning path in Data Science and Data Analysis

AKKA (*Udemy*) 2020

- ▶ **Data processing** with Python (*pandas, numpy, matplotlib*). IDEs: *PyCharm* and *Jupyter Notebook*.
- ▶ **Statistical analysis** and models with *R* and *SAS*. Exploratory Data Analysis using *RStudio*.
- ▶ **Machine Learning** with *Python* (*Scikit-learn, TensorFlow, Keras, nltk*) and *R*.
- ▶ **Business Intelligence** and **Data Visualization**. *Power BI, QlikView* and *Tableau*.
- ▶ **Big Data** infrastructure with *Hadoop*. Managing of big data on a cluster with *HDFS* and *MapReduce*. Analyze data with *Pig* and *Spark*.

International Graduate Program of The AKKAdemy

AKKA Technologies (*Geneva*) October 2019

One-month intensive consulting program in Geneva

- ▶ **Consulting skills:** problem analysis and statement, business models, agile methods, business case definition, emotional intelligence, and business culture. Disruptive innovation workshop, customer analysis
- ▶ **Innovation projects:** actively teamwork in 2 innovation projects, learn design thinking methodology, innovative business model, focus on user lifecycle experience, cross cultural mindset and collaboration, presentation of innovation projects results

MSc in Mechatronics and Industry 4.0

University of Vigo (*Spain*) 2018/2019

- ▶ Synergistic integration of mechanical engineering with electronics and intelligent computer control in the design and manufacture of industrial equipment and processes.
- ▶ Specialization in Automation, Robotics, Data analysis and Industry 4.0.

MSc in Industrial Engineering

University of Vigo (*Spain*) 2016/2018

- ▶ Advanced engineering studies with competences in mechanics, automation, electronics, electricity, programming and project management.
- ▶ ERASMUS in Luleå University of Technology (Sweden).

BSc in Industrial Technologies Engineering

University of Vigo (*Spain*) 2012/2016

- ▶ Multidisciplinary studies in Industrial Technologies.
- ▶ Bachelor's thesis in Project Management using Odoo and Android devices.

PROFESSIONAL EXPERIENCE

R&D Engineer | July 2020 – Present | 2 year 7 months | Brussels (BE)

TOYOTA

Installation of multimedia components in cooperation with different departments.

Role/ Objectives

- ▶ Development of a Machine Learning tool to analyse customer feedback from tweets.
- ▶ Twitter data extraction, Sentiment Analysis, Named Entity Recognition and Topic Modelling.
- ▶ Creation of internal insights platform for pull communications using Streamlit.
- ▶ TWC Catalyst modelling gap correction using Machine Learning.
- ▶ Infotainment system benchmarking of top European electric vehicle competitors.

Key Achievements/ Deliverables

- ▶ Human Level Performance was achieved for Sentiment Analysis.
- ▶ Method for processing the data to leverage different word embeddings (Char, POS and Word embedding).
- ▶ Demonstrated that integration between NLP and VoC provides valuable insights for businesses.
- ▶ Catalyst model accuracy improved in a 60% by using Machine Learning.

Digital Consultant | Sept 2019 – Present | 3 years | Brussels (BE)

AKKODIS

Data Scientist and Business Analyst, developing solutions for client's pain points.

Project description/ Main tasks

- ▶ Digital Transformation in Life Sciences. Pharma 4.0. Market analysis: SWOT, PESTLE.

Main results

- ▶ Solution for Predictive Maintenance in Air compressors based on Machine Learning.
- ▶ AI Club: Creation of a chatbot with Machine Learning capabilities in Microsoft Azure.
- ▶ Management of stakeholder engagement in the different projects.

Digital Transformation Project Manager | Sept 2018 – Sept 2019 | 1 year | Vigo (SPA)

GKN DRIVELINE

Development of a completely autonomous manufacturing unit cell

Project description/ Main tasks

- ▶ Industry 4.0 Project Manager: digitalization, automation, robotics, ETL, IOT.
- ▶ Predictive Maintenance and Anomalies Detection with Python.

Key Achievements/Deliverables

- ▶ 20.000 € in cost savings per manufacturing line and year.
- ▶ Leadership and coordination of a group of 4 contractors using Agile.

Composite Materials Engineer| Mar 2018 – Sep 2018| 6 mos | Porriño (SPA) CTAG (Automotive Technology Centre of Galicia)

Analysis of the structural behaviour of a glass-fibre brake pedal

Project description/ Main tasks

- ▶ Finite Element Analysis (**FEA**) of Polymer Matrix Composites (GFRP, CFRP) with **DIGIMAT**.
- ▶ Implicit **FEM** analysis with **MSC Nastran** (SOL 400) and **ANSYS** (ACP module for **composite materials**).
- ▶ Explicit **FEM** analysis with **ESI PAM-CRASH** and **RADIOSS**.
- ▶ **CFD** with **ANSYS Fluent** for EGR valves.
- ▶ Pre-processing and post-processing using **HyperWorks**.
- ▶ Analysis of **bio-composites** behaviour. **PLA-Natural Fibres** (flax, hemp, sisal).

Main results

- ▶ **Testing** of different laboratory specimens and automotive parts.
- ▶ **Validation** of the analysis performed.

LEAN Engineer Internship| Mar 2016-Jul 2016| 4 months | Vigo (SPA) DINAK

LEAN manufacturing support

Project description/ Main tasks

- ▶ Using of **LEAN** manufacturing tools such as **5S** and **TPM**.
- ▶ Design of safety systems using CAD software such as **SolidWorks**, **CATIA V5** and **AutoCAD**.
- ▶ Obtaining **Key Performance Indicators (KPI)** and other indicator for preventing risks at the workplace.

Main results

Management of **LEAN manufacturing** tools in a 4.0 industry environment.