# ÁLVARO
# FIEIRA WACHTENDORFF

alvarofw@gmail.com
+61 432 765 833
alvarofieira.github.io/portfolio


## INTRODUCTION

I am a **Data Engineer** with experience building cloud-native solutions, working on AI-driven projects, and delivering results aligned with client needs. I specialise in scoping data initiatives, designing robust pipelines, and integrating ETL processes. My technical expertise spans **SQL**, **Python**, **C#**, **AWS**, and **Microsoft Azure**. With a strong consulting background, I help organisations modernise data infrastructure and unlock insights for better decision-making.

I also bring experience handling data in the physical domain, drawing on my background in **Aerospace Engineering** from Imperial College London, where I applied genetic evolutionary algorithms to optimise drone blade design and was awarded the Centenary Prize for my work on reusable rocket propulsion systems.

## PROFESSIONAL EXPERIENCE

**SENIOR DATA CONSULTANT,** ALTIS CONSULTING, **Sydney (Australia), Jan 2025 – Present**

- **Royal Australasian College of Physicians:** Integrated a new data source into an Azure data warehouse, updating ADF pipelines and SQL procedures to support reporting for a major health education body.

- **TEG, Ticketek:** Currently developing Python scripts for real-time stadium ingress monitoring and crowd control and working in .NET on the app's ticket sharing feature.

**DATA ENGINEER,** PLINC (A NEXT15 BRAND), **London (United Kingdom), Oct 2021 – Jan 2025**

- **Promoted** from Junior Data Engineer to Data Engineer after only one and a half years at Plinc, where I was responsible for delivering data projects and analytics solutions for prominent retail, automotive and restaurant clients across the UK and Europe.

- **Project Scoping & Execution:** Scoped out and delivered projects exceeding **£150K (A$295K)** in 2024, leveraging data engineering expertise to create impactful data pipelines that improve customer insights and enhance client decision-making. Some examples include:

    - **Browse Data Integration:** Designed and deployed a large-scale ETL integration of GA4 browse data into the database of a major UK automotive retailer, managing **1M+** daily views. This integration connects browsing data to customer profiles via cookie IDs, enabling data-driven marketing, with some campaigns achieving an annual revenue uplift of **£520K (A$1M)**.
    - **Autocentre Real-Time Pipeline:** Transitioned the client's autocentre data from daily file uploads to a real-time data stream, enabling real-time customer interactions across **540+** UK locations while maintaining customer matching levels to accurately link transactions to existing customer profiles.

- **Cloud Migration:** Played a crucial role in migrating **7M+** customer records and the entire transaction history for a large UK restaurant chain from on-premises systems to Azure. This involved establishing cloud databases, setting up ingestion jobs, and configuring ADF pipelines.

- **Technical Skills:**
    - **SQL**: Used daily for ETL and complex data transformations.
    - **C#:** Developed backend systems and APIs to support client interfaces.
    - **React**: Created an interface for client tools, including campaign analysers.
    - **Client Interaction:** Regularly participate in client meetings, discussing project feasibility and tailoring solutions to their needs.

- **AI Ambassador (July 2024 – Jan 2025):**
    - Advocated for the adoption of AI technologies to streamline workflows.
    - Developed a C# chatbot that enables clients to inquire directly about their own data, retrieving real-time counts and insights through backend database queries.

**CO-FOUNDER,** ASTRON SYSTEMS LTD., **London (United Kingdom), April 2021 – July 2022**

- Co-founded a start-up focused on reusable launcher technologies suitable to the small satellite market.
- Developed investor relations and secured the Wescott Research Grant for prototype development.

PORTFOLIO PROJECTS

**NEAR-EARTH OBJECTS (NEO) DATA PIPELINE,** github.com/AlvaroFieira/NASA_Asteroid_Tracker

- Built a data pipeline system to process, classify, and visualise Near-Earth Object data from NASA's NEO API:
  - Utilised **Python** and **Kafka** for real-time data ingestion and processing.
  - Applied machine learning models with **PySpark** to classify NEOs based on characteristics.
  - Developed a **Flask**-based web dashboard for interactive data visualisation.

**RESTAURANT BOOKING AI CHATBOT,** github.com/AlvaroFieira/Restaurant_AI_Chatbot

- Built an AI chatbot to manage restaurant information, bookings, and cancellations:
  - Designed with **C#** and **Semantic Kernel** to leverage generative **AI** for user-friendly interactions.
  - Integrated a **SQL** backend to handle booking and cancellation features, enhancing user experience.

**REAL-TIME STOCK DATA PIPELINE,** github.com/AlvaroFieira/Stock_Data_Pipeline

- Designed and implemented a scalable pipeline for real-time stock price data ingestion and transformation:
  - Orchestrated ETL workflows to fetch, clean, and store stock price data in **AWS S3**.
  - Automated tasks using **Airflow**, leveraging **AWS EC2** for scalability.

HIGHER EDUCATION

**London (United Kingdom), Sept 2017 – June 2021**

**MEng AERONAUTICAL ENGINEERING WITH SPACECRAFT ENGINERING**

IMPERIAL COLLEGE LONDON

- Earned **a First-Class Honours** degree through a four-year integrated master's program.
- Became an Aeronautics Student Researcher (Aug – Oct 2020) and led a group of PhD students in designing a laboratory experiment for future Aeronautics students.

AWARDS

- **Aeronautics Student Centenary Award:** Recognised for my excellence in a Group Design Project for reusable rocket propulsion systems.
- **Applications Award:** Granted to the team that produced the best Aerospace Vehicle Design Project.

PROJECTS

- **Final Year Project:** Developed a UAV designed specifically for Venus's exploration. Utilised MATLAB for algorithm development and ISIGHT for blade optimisation, incorporating evolutionary genetic algorithms to enhance performance and efficiency.
- **Design and leadership:** Successfully led various CAD projects, demonstrating strong leadership and project management skills. Additionally, I completed a flight test course at Cranfield University, furthering my practical knowledge.

SECONDARY EDUCATION

**CANTERBURY SCHOOL OF GRAN CANARIA, Canary Islands (Spain), Sept 2002 – June 2017**

SCHOOL ACTIVITIES:

- **Sixth Form Deputy Head Boy:** Delivered speeches at major events and coordinated student activities.
- **Duke of Edinburgh's International Award:** Completed fundraising and awareness initiatives, including a film project on forest fires.
- **Exchange programme:** Participated in a two-week academic exchange in Philadelphia, USA.

SCHOOL QUALIFICATIONS:

- **A Levels:** 5 A*, 1 A including Physics, Further Mathematics, Chemistry, English, Spanish and French.
- **IGCSEs:** Highest Mark in Spain in Physics and Geography and Highest Mark in Europe in Further Mathematics.

SKILLS

**LANGUAGES:**

Spanish (Native), English (Fluent), French (Intermediate)

**PROGRAMMING LANGUAGES:**

Python, C#, SQL, HTML, CSS, JavaScript, React, MATLAB

**DATA ENGINEERING TOOLS:**

Microsoft Azure, DevOps, AWS, SSMS, SSIS, Git, PySpark, Airflow, Kafka, Flask, Jira

**OTHER SKILLS:**

Full British Driving License, Leadership, Teamwork, Communication, Organisation