

José Luis Patiño Andrés

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SUMMARY

Staff Data/Software Engineer with wide knowledge and large exposure to geospatial data engineering. Strategic and hands-on technical leader with over 15 years of software engineering experience and specialising in the architecture and scaling of high-performance data platforms. Proven track record in leading organisation-wide technical transformations, including complex cloud migrations from GCP to AWS. Expert in designing complex and geospatial architectures using Python, Apache Iceberg, and modern data stack. Adept at enforcing rigorous Data Engineering foundations and bridging the gap between advanced spatial analysis and scalable, production-grade infrastructure.

SKILLS

Languages	Python, SQL, Go, Rust (personal, leisure projects).
Data	PostgreSQL, Apache Iceberg, dbt, Apache Airflow, AWS Athena, BigQuery, Apache Spark, Apache Beam, DuckDB.
Infrastructure	AWS, GCP, Terraform, Kubernetes.
Practices	CI/CD (GitHub Workflows/Actions, CircleCI, GCP Cloud Build); Governance (OpenMetadata); Observability (OpenTelemetry, Dash0, Grafana); Data Quality (Great Expectations, Pandera).
Geospatial	PostGIS, STAC API, Apache Sedona, GeoParquet.

WORK EXPERIENCE

Agreena Technology Limited

Aug 2022 - March 2026

Agreena is a leading Danish AgTech company operating a carbon credit marketplace. The platform incentivises farmers to adopt regenerative practices, quantifying carbon reductions/removals to issue high-integrity credits for international corporations.

Staff Data Engineer

Aug 2024 - March 2026

- Promoted to define the long-term data vision and oversee a large-scale architectural migration during a company-wide platform shift.
- **Product strategy:** Played a key role defining data strategy at organisational level. Periodically participated with Engineering Managers and Director in the company roadmap definition.
- **Next-Gen Geospatial Storage:** Architected and implemented a modern data lakehouse using **Apache Iceberg** and **GeoParquet**, significantly improving query performance and cost-efficiency for massive spatial datasets. Started to explore new solutions for large-scale geospatial data processing, such as **Apache Sedona**.
- **Data Discovery/Governance:** Introduced **OpenMetadata** as an organisational platform for data discovery, quality measurements, and governance.
- **Data Quality/Validations:** Researched different solutions for data quality and validation, such as **Great Expectations**, **Pandera** or **PointBlank**.
- **Infrastructure Monitoring:** Integrated **OpenTelemetry** across all the REST APIs of different data layers for observability and reliability.
- **RAG/Inference systems/AI:** Assisted in the architecture of a RAG application, as well as in AI agents integration (Gemini) via REST APIs.

Data Engineering Lead

Jan 2024 - Aug 2024

- Steered the data function through an organisational restructure, balancing technical debt management with high-priority feature delivery.
- **Technical Leadership:** Appointed to manage a team of 6 engineers, adopting a "Product Mindset", ensuring data pipelines served both the commercial carbon marketplace and internal science teams.
- **Infrastructure Reliability:** Stabilised legacy pipelines integrating **Apache Beam** (DataFlow) and **Airflow** (Cloud Composer) workflows, improving the success rate of farm-level carbon sequestration calculations.
- **Foundational Standards:** Established organisation-wide Data Engineering standards, focusing on engineering best practices, CI/CD for data pipelines, and robust data observability.

Senior Data Engineer

Aug 2022 - Jan 2024

- Recruited as a core individual contributor to build the foundational ingestion engines for the UK branch.
- **Pipeline Engineering:** Designed and deployed end-to-end data processing pipelines using Python, Apache Airflow, and PostgreSQL to ingest diverse agricultural and satellite data.
- **Spatial Database Design:** Built and maintained complex **PostGIS** schemas to index and/or store agricultural data from ML inference processes.
- **APIs Development:** Architected and built REST APIs using **Python/FastAPI**.
- **Systems Engineering:** Created all the CI/CD pipelines for the pipelines code, the REST APIs and GCP infrastructure automated deployments using **Terraform**.
- **Technical Leadership:** Mentored both Senior and Mid engineers; driven the hiring processes of new ones, conducting interviews and deciding candidates.

Hummingbird Technologies Ltd. - Senior Data Engineer

May 2021 - June 2022

Hummingbird Technologies was a British tech startup dedicated to analyse satellite imagery via ML applications to extract useful agricultural data. The company was finally acquired by Agreena in 2022.

Lead the design and development of the product platform, based on offering technical insight of crops and fields via satellite and UAV imagery analysis through a web interface to a range of clients in the agricultural industry.

- Architecture design and implementation of microservices for the data platform.
- Platform cloud infrastructure design and implementation using **GCP/Terraform**.
- Led the design and implementation of data processing pipelines, using **Airflow**.
- Led the design and implementation of public APIs for new products (**Python/FastAPI**).
- Migrated old web platform application backends in PHP to new ones in Python/FastAPI using GPC Cloud Run.

Plentific Ltd. - Senior Software Engineer

Aug 2020 - May 2021

Lead one of the Backend Engineering groups dedicated to implement new features in the product platform, a marketplace based on connecting contractors with potential clients in need of their skills, and also manage their commercial relationships and billing afterwards.

- Modelling data to accomplish new business requirements in **PostgreSQL** databases.
- Managed a backend team of 4 engineers, being the technical lead of the team.
- Maintain and extend existing **Python/Django** Backend services.
- Developing new REST APIs for the product web user interface.

VASS Logic Ltd. - Freelance Software Engineer

Jan 2020 - Aug 2020

Offered my expertise as a Senior Software Engineer through my own company. My main client was Pole Star Space Applications, for which I worked before as a Permanent Senior Software Engineer.

Pole Star Space Applications Ltd. - Senior Software/Data Engineer

Aug 2016 - Dec 2019

Pole Star is a technology company specialised in maritime surveillance and traffic tracking that offers a range of unique services to different sectors like banking, offshore, shipping, defense and governments.

Senior Engineering member in the Technology Team. Involved in the design and implementation of a brand new product offered by the company, as well as in the improvement of one of the company product platforms. Being a company dedicated to Maritime industry, the products I worked in at the time were a web platform offering data insight, tracking and thorough analytics of cargo ships across the globe, for a wide variety of commercial client sectors. This included the implementation of complex data collection and aggregation systems.

- Architecture design and implementation of new services for the main product platform.
- Development and maintenance of a distributed system of data aggregation from multiple sources to build company products, using **Python, Django, Flask, Go, PostGIS, MongoDB, AWS** cloud platform.
- Implementation of both public and Frontend APIs to interact with the product platform.
- Migration of legacy systems to newer technology stacks, using **Kubernetes**.
- Technical leadership in multiple projects; involved in new candidates hiring process conducting technical interviews and making hiring decisions.

Earlier career

2010 - 2016

Software Engineer roles, focused on Backend web development, APIs design and implementation and data integration systems.

- Maykin Media BV - Senior Software Engineer (Dec 2013 - Aug 2016).
- Lukkien BV - Software Engineer (Mar 2013 - Dec 2013).
- Travelbird Nederland BV - Software Engineer (Aug 2012 - Feb 2013).
- Maykin Media BV - Internship (Feb 2012 - Aug 2012).
- Krannich Solar GmbH (Spain branch) - IT Department staff (Oct 2010 - Aug 2011)

EDUCATION

University of Valencia (ETSE) - B.Sc. Technical Engineering in Telecommunications

2006 - 2010

University of Valencia, [School of Engineering](#). Telecommunications Engineering degree with a strong focus on telecommunication networks, programming, information treatment, databases, and cryptography/security.

Last year in [University of Eastern Finland](#) doing Final Project (2009 - 2010). Collaboration in a publication of IEEE paper "Security Threats in ZigBee-Enabled Systems: vulnerability evaluation, practical experiments, countermeasures and lessons learned.

IES Federica Montseny - Technician in Computers and Communications Systems

2004 - 2006

Professional degree. Final working internship in IT services company (Sermicro, S.A.) as networks technic - deployment, configuration and maintenance of TCP/IP network equipment for major ISPs in Spain.