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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 GeoParquet, with deep specialisation in PostGIS and STAC standards. Adept at enforcing rigorous Data Engineering foundations and bridging the gap between advanced spatial analysis and scalable, production-grade infrastructure.

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**.
- **Foundational Standards:** Established organisation-wide Data Engineering standards, focusing on Pythonic best practices, CI/CD for data pipelines, and robust data observability.
- **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:** Mentored a team of engineers to adopt 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.

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** to serve the data to external clients as well as to internal teams.
- **Systems Engineering:** Created all the CI/CD pipelines for the pipelines code, the REST APIs and GCP automated deployments using Terraform.

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**).

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.
- Mentoring junior engineers, planning development iterations.
- 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.
- Periodic participation in product design and development roadmap definition with Product Owners.
- 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**.

Maykin Media BV - Senior Software Engineer

Dec 2013 - Aug 2016

Senior Software Engineer, and part of the Development Team in the software development agency. Design and development of multiple web projects for commercial customers.

- Developed multiple data collection and indexing systems for different projects and clients, using **PostgreSQL, PostGIS, Apache Solr, Elasticsearch** and other technology stacks.
- Backend REST APIs for mobile applications, mainly using **Python/Django**.
- Integrated systems with external providers and a variety of technologies to offer tailored services.

Lukkien BV - Software Engineer

Mar 2013 - Dec 2013

Software Engineer, part of the Digital Department Staff in the media agency. Development of commercial websites and web products, such as webshops and Content Management Systems.

- Development of a variety of web projects for commercial customers. Mainly webshops and commercial sites for global companies, both Dutch and from other countries.
- Maintenance and troubleshooting of existing legacy projects.

Travelbird Nederland BV - *Software Engineer*

Aug 2012 - Feb 2013

Development of new modules for the existing product, consisting in a platform offering travel bargains to the public via website. The company product was based in collecting expiring offers from all travel agencies in Netherlands and offering them for a lower price to the public.

- Development of new modules for the existing product web platform.
- Development of REST and SOAP API clients to collect and store data from external providers.
- Improving/extending backend functionalities.

Maykin Media BV - *Internship*

Feb 2012 - Aug 2012

Makin Media is a Dutch software development agency, based in Amsterdam. They pride themselves on developing tailored software solutions for a variety of customers, from international companies to the Dutch Government, specialising in web development and data processing systems.

Paid Internship as Software Developer Intern in the software agency. Goal of the internship was to gain knowledge about software engineering, specially web development, while participating in real projects of agency customers under supervision of senior engineers.

- Maintenance of an existing commercial product consisting in a web platform to provide data to travel industry. By collecting and aggregating data from multiple flights and accommodation providers, the system was presenting a comprehensive API that clients, i.e. travel agencies, could subscribe to in order to obtain critical information for their business operations.
- Development of a REST API for a customer company product to enable mobile applications.

Krannich Solar GmbH (Spain branch) - *IT Department Staff*

Oct 2010 - Aug 2011

Developed multiple internal applications as part of the IT Department Staff. Specifically, took a relevant role in the development of a web-based internal warehouse managing system, deployed in multiple branches of the company in Europe.

- Intranet applications development and servers management.
- Management and maintenance of a variety of corporative servers and services (email, proxy, LDAP...).

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.

SKILLS

Programming	Mostly Python as first language of choice, with professional exposure to Java, Go, and a curiosity in Rust and C++.
Cloud Platforms	Professional experience in GCP and AWS, using Terraform and IaC tooling. Familiar with Kubernetes, and cloud-native applications development.
Databases	Wide experience with PostgreSQL, professional exposure to MySQL, MongoDB and MS SQL Server.
Data management	AWS Athena, Apache Iceberg, exploring Apache Sedona for large scale GIS data.
Data processing	Apache Airflow, Apache Beam, Anyscale
Development cycle tools	GitHub (workflows/actions), CircleCI, GCP Cloud Build.