

Cristóbal Carnero Liñán

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Summary

AWS Solutions Architect certified with more than 10 years of professional experience designing, building and deploying server-side solutions in the cloud, for different industries like management consulting, energy and utilities, video games, and university research groups. Expertise in Backend Development, Data Engineering and DevOps. Fullstack web3 developer.

Education

- 2009 – 2011 **Master in Software Engineer and Artificial Intelligence**, *Universidad de Málaga*.
- 2002 – 2007 **Computer and Software Engineering**, *Universidad de Málaga*.
5-year university degree. Bachelor Thesis approved with Special Distinction.

Certifications

- 🌟 **AWS Certified Solutions Architect – Associate**, *Amazon Web Services*.

Experience

Since Apr **Freelance**, *MLOps Engineer & DevOps*.

- 2021
- MLOps and DevOps for one of the top 10 pharmaceutical companies as contractor.
 - Admin DKube/Kubeflow/Kubernetes infrastructure.
 - Create and deploy Kubeflow pipelines and models with KServe.
 - Work with DS teams to support them in all the stages of the ML lifecycle. That includes: creating proof of concepts, help with specific parts of the code, deploy in production, create utilities libraries and templates, custom Docker images, writing documentation, training sessions,...
 - Manage infrastructure with Terraform (for AWS) and GitLab CI pipelines for Business Analytics project.

Nov 2018 - **Cathedral Software**, *Senior Data Engineer & DevOps*.

- Mar 2021
- Develop solutions for international client, one of the biggest management consulting firm.
 - Backend services for web applications using Django REST Framework for API, Celery for background tasks, and Django Channels for notifications.
 - Work with Data Science team in order to design and implement cloud architecture solutions in both AWS & Azure, using Terraform.
 - Implement continuous integration with different stacks: CircleCI, Azure DevOps, Docker, Helm, Kubernetes.

- Feb 2018 - **Virtually Live**, *Senior Server Engineer & DevOps*.
- Nov 2018 – Independently responsible for designing full real-time data pipeline architecture from the ingestion of telemetry from live events (*Formula E*), processing, and serve the output stream data to mobile games at scale.
- Implement the key parts of the architecture in Python using technologies like ZeroMQ, Kafka and Tornado.
 - Work closely with Data Science team to provide a stream processing framework using Apache Heron for their needs.
 - Deployment of a Kubernetes cluster in AWS using Ansible, including hosted applications using Helm, and continuous integration with Jenkins.
 - Contributions to open source project Apache Heron in order to fix deployment to Kubernetes and complete its documentation.
 - Work with R&D department designing and developing a prototype for a real time computer vision app using deep learning with Keras.
- 2017-2018 **Cathedral Software**, *Senior Software Engineer*.
- Work on the data pipeline of the business intelligence platform of one of the largest travel web companies.
 - Develop ETL in Airflow to calculate KPIs and provide reporting capabilities for internal tools of the client company.
 - Responsible to design and develop backend solution to provide real time chat and other features to mobile app using Tornado.
- 2015 - 2017 **VATIA Energía**, *Software Engineering Manager*.
- Responsible to design and develop a web platform for automatic *Virtual Energetic Audit* and *Energetic Benchmarking*.
 - Develop key parts of the system: Node.js APIs, background tasks using Celery for monitoring, and data analysis/reporting with Pandas and Matplotlib.
 - Responsible for recruiting technical staff: write job descriptions, qualify resumes, interview candidates and provide assessments.
- 2011 – 2013 **Melomics Media**, *Backend Developer & System Administrator*.
- Server side development and deployment of a massive online repository of computer generated music, with search, streaming, purchases and public API.
 - Administration of a cluster of Debian servers.
 - Development of automatic video edition software with additional post-processing capabilities as chroma key, filters, titles, subtitles, publishing,...
 - Technologies: Python, web.py, MongoDB, Elasticsearch, Memcached. APIs: Paypal, Google Wallet, Facebook, Google+.
- 2009 – 2011 **Universidad de Málaga**, *Researcher*.
- Computer vision research in the department of “*Computational Intelligence and Image Analysis*”, managed by José Muñoz Perez and Enrique Dominguez Merino.
 - Technologies: Python, C++, OpenCV, cvBlob, Matlab, Octave.
- 2007 – 2009 **Tedial**, *Backend Developer & System Administrator*.
- Server-side media storage technologies.
 - Development of an interpreter for a custom programming language designed for testing DB operations.
 - Authentication, authorization, and access control with LDAP.
 - Management software for surveillance cameras.
 - Deployment of software and administration of several SuSE Enterprise Server client installations.
 - Technologies: C++, Python, Oracle, SOAP.
- 2005 – 2006 **Novasoft**, *Software & Web Developer*.
- Educational video games in Flash.
 - Started in a one month scholarship, but then the company hired for a longer project.
 - Technologies: Flash, ActionScript, HTML, Javascript.

Personal projects

Since 2021 **Mukabe Land**, <https://mukabe.land>.

- Web3 collaborative two-dimensional canvas, divided into lands, that are tradeable NFTs.
- Responsible for all technical parts of the project: backend, frontend, smart contract, infrastructure, CI/CD.

2020 – 2022 **EnRemo.to**, <https://enremo.to>.

- Directory of tools for remote working built in less than 24h during COVID-19 as a No-Code project.
- Job offers for remote positions in companies based in Spain.
- Blog about remote working.

2016 – 2018 **Mukabe**, <https://mukabe.com>.

- *Mukabe* is the new way to navigate through information, the new social and online organization, and the new way to get visibility for you, your projects or your company.
- Technologies: Python, Django, Celery, Redis, ElasticSearch, Ansible, Fabric, AWS, Social APIs (Instagram, Facebook, Google+), HTML5, CSS3, Bootstrap, JavaScript, JQuery.

2015 – 2017 **RegaloInteligente**, <http://regalointeligente.com>.

- Search engine of gifts with parameters like gender and age, and filter for prices.
- Web and Android applications. Twitter bot with auto posting and automatic reply. Telegram bot.
- Technologies: Python, Pyramid, MongoDB, ElasticSearch, Amazon Product Advertising API, Twitter API, Telegram Bot API, HTML5, CSS3, Bootstrap, JavaScript, JQuery.

Free Software Projects

Since 2021 **Datacker**, <https://github.com/cristobalcl/datacker>.

Convert your notebooks to runnable Docker images. The quickest way to bring Data Scientists work to production.

2009 – 2012 **cvBlob**, <https://github.com/cristobalcl/cvblob>.

Blob library for OpenCV, widely used in computer vision and robotic research.

Languages

Spanish Native

English Fluent

Qualities

Computer skills

Languages: Python, Bash script, JavaScript, Elixir (*learning*).

Software Engineering: TDD (Test-Driven Development), Clean Architecture, Scrum, Git-flow, Trunk-Based Development.

Databases: PostgreSQL, MongoDB, ElasticSearch, Redis.

Frameworks: Django, Django REST framework, Celery, Airflow, Vue.

Infrastructure: Kubernetes, AWS, Azure, DigitalOcean.

Deployment: Docker, Helm, Jenkins, Terraform, Ansible, Supervisor, Nginx.

Data Science: Kubeflow, KServe, DKube, Pandas, TensorFlow, Keras, JupyterLab.

Science:

Web3: Solidity, HardHat, Vyper, Brownie, web3.py, ether.js, Alchemy.

Environments: Git, Make, Vim/NeoVim, tmux, Bash, Fish.

Personal skills

Engineering

- Ability to find creative solutions.
- Strong analytical, able to anticipate issues, resolve concerns and improve efficiency.
- Care of coding standards and best practices.
- Eager to learn and develop new skills.

Others

- Ability to work without direct supervision.
- Great written communication skills (wide experience in both Spanish and English).

Interests

DDD (Domain-Driven Design), software architecture, GNU/Linux, free software, image processing, computer vision, computer graphics, artificial intelligence.