

# 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.

## 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 Nov 2018 **Cathedral Software**, *Senior Data Engineer & DevOps*.
- Work for one of the biggest management consulting firm.
  - Develop 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 - Nov 2018 **Virtually Live**, *Senior Server Engineer & DevOps*.
- 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.

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## Personal projects

- Since 2020 **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.
- Since 2016 **Mukabe**, <https://mukabe.com>.
- *Mukabe* is the new way of 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.

Since 2015 **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.

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## Free Software Projects

2014 – 2015 **WooDPD**, <https://es.wordpress.org/plugins/woodpd/>.

WordPress Plugin to integrate DPD purchases in WooCommerce.

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

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

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## Languages

Spanish Native

English Fluent

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## Qualities

### Computer skills

*Languages:* Python, Bash script, 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.

*Infrastructure:* Kubernetes, AWS, Azure, DigitalOcean.

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

*Data* Pandas, Keras, Jupyter.

*Science:*

*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.