

Cristóbal Carnero Liñán

📞 +34 655 52 79 11
✉ ccarnerolinan@gmail.com
🌐 <https://cristobal.dev>
12th February, 1981



Summary

Software Engineer with more than 15 years of professional experience in designing, building, and deploying robust server-side solutions across diverse cloud environments. My career spans multiple industries, including management consulting, healthcare, energy and utilities, video games, and academic research. I specialize in Backend Development, Data Engineering, and DevOps. Additionally, I possess a strong background in AI development, with practical experience using the OpenAI API and contributing to the LangChain project.

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 (until 2023)**, *Amazon Web Services*.
- 🌟 **Introduction to Machine Learning in Production**, *DeepLearning.AI*.

Experience

- Since Apr 2021 **Contractor, MLOps Engineer & DevOps**.
- MLOps and DevOps for one of the top 10 pharmaceutical companies.
 - Admin DKube/Kubeflow/Kubernetes infrastructure.
 - Create and deploy Kubeflow pipelines, and models with KServe.
 - Work with data scientist teams to support them in all the stages of the ML lifecycle. That includes: creating proof of concepts, helping with specific parts of the code, deploying in production, develop utility libraries and templates, custom Docker images, writing documentation, and training sessions.
 - Manage AWS infrastructure using IaC (Infrastructure as Code) with Terraform, GitLab CI pipelines, and data engineering for Business Analytics project.

- Nov 2018 - **Cathedral Software**, *Senior Data Engineer & DevOps*.
- Mar 2021
- Build solutions one of the biggest management consulting firms.
 - 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 to design and implement cloud architecture solutions in both AWS & Azure, using Terraform.
 - Implement continuous integration with different stacks: CircleCI, Azure DevOps, Docker, Helm, and Kubernetes.
- Feb 2018 - **Virtually Live**, *Senior Server Engineer & DevOps*.
- Nov 2018
- 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 (before EKS existed), 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, web frontend, smart contract, infrastructure, CI/CD.

Free Software Projects

- Since 2023 **CLARA: Code Language Assistant & Repository Analyzer**, <https://github.com/SeednapseAI/clara>.
AI tool to help developers understand and work with a code repository.
- 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.
- Software Engineering:* TDD (Test-Driven Development), Clean Architecture, Scrum, Git-flow, Trunk-Based Development.
- Databases:* PostgreSQL, MongoDB, Elasticsearch, Redis, Snowflake.
- Frameworks:* Django, Django REST framework, FastAPI, Celery, Airflow, Vue.
- Infrastructure:* Kubernetes, AWS, Azure, DigitalOcean, Supabase, Render, Vercel, Railway.
- Deployment:* Docker, Helm, Jenkins, Terraform, Ansible, Supervisor, Nginx.
- Data Science:* Kubeflow, KServe, DKube, Pandas, TensorFlow, Keras, JupyterLab.
- AI:* OpenAI API, LangChain (contributor), prompt engineering, Pinecone, ChromaDB.

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

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

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

Software architecture, GNU/Linux, free software, blockchain, web3, image processing, computer vision, computer graphics, artificial intelligence, No-Code.