Víctor Asenjo Carvajal

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Education

Bachelor's degree in Informatics Engineering - *Major in Software Engineering* 2019 - 2023
Polytechnic University of Catalonia (UPC - FIB)

Skills

Languages: Spanish (Native); Catalan (Native); English (C1 – Advanced)

Programming: Python (High); Java (High); C++ (High); Spring Framework (High); Flutter (Dart - High); SQL (High); CCL (Cerner Command Language - High); JavaScript / React (Intermediate); HTML5 (Intermediate)

AI & Cloud: AWS; Azure; Oracle Cloud Infrastructure (OCI); Terraform (Infrastructure as Code); IAM; MCP (Model Context Protocol) servers; LLM applications (LangChain, RAG); Cloud-native services

Technical Skills: PostgreSQL; MySQL; Docker; Git; Continuous Integration/Continuous Deployment (CI/CD); Agile Software Development; Scrum; Kanban; JIRA; Confluence

Soft Skills: Problem-Solving; Analytical Thinking; Effective Communication; Team Leadership; Mentoring & Knowledge Sharing; Decision-Making Under Pressure; Adaptability; Cross-Functional Collaboration

Experience

Lead Software Engineer – AI Innovation Mar 2026 – Present
Clarivate – Life Sciences & Healthcare (LS&H) *Barcelona*
- Lead software engineering in the **AI innovation team** of the Life Sciences & Healthcare division, building AI-powered products for the life sciences and healthcare domain.
- Build and operate cloud infrastructure on **AWS and Azure** as code with **Terraform**, including **IAM** configuration for secure access between services.
- Develop **MCP servers** that expose data and tools to LLM agents, plus the supporting services in **Python and Java** and **React** front-ends backed by **SQL**.

Software Engineer Dec 2023 – Feb 2026
Oracle *Barcelona*
- Designed and optimized reporting solutions using **SQL, Python, and Oracle Cloud**, cutting query times from 30 minutes to less than two seconds and ensuring reliability across 10+ TB of healthcare data.
- Automated manual workflows with **Python and Shell scripts**, saving 20+ hours of operational overhead per month.
- Developed an **AI chatbot** to help building queries using a custom query language **CCL (Cerner Command Language)**.
- Partnered with teams in Dubai, Spain, and the US to deliver **custom clinical reports**, enhancing decision-making for 50+ hospitals worldwide.

Associate University Professor 2023 – Present
Polytechnic University of Catalonia – Software Engineering Projects *Barcelona*
- Instructed and mentored 60+ students in **Agile, Scrum, and Kanban**, ensuring hands-on application of software engineering practices.
- Supervised semester-long projects with **Java, Spring Boot, SQL, and React**, guiding 12 teams to deliver **100% of projects on time** with industry-grade quality.
- Evaluated and supervised Spain's national university entrance exams (**PAU**), correcting 200+ exams in 2025 while ensuring **100% consistency and fairness** in assessments. Jun 2025

Research Support Staff Jan 2023 – Nov 2023
Polytechnic University of Catalonia – DTIM Research Group *Barcelona*
- Built and maintained **ETL pipelines** for heterogeneous biomedical datasets, reducing data integration time by **40%** and improving reproducibility in published studies.
- Supported 10+ PhD researchers with **data wrangling, visualization, and semantic web tools**, accelerating research output and cutting preparation time by **25%**.
- Co-authored technical documentation and assisted in preparing academic publications, contributing to 2 peer-reviewed papers.

Data Analyst Oct 2022 – Jan 2023
SDG Group · Data & Analytics Consulting Firm *Barcelona*
- Improved **data quality processes** for a major banking client by designing validation rules and automated checks, reducing reporting inconsistencies by **30%** and ensuring compliance with **Basel III and IFRS 9 standards**.

Projects

FCBQ Telegram Bot. Developed a bot for the Catalan Basketball Federation (FCBQ) to automate referee notifications, schedules, and updates, improving communication efficiency and reducing manual coordination. Built with *Python, Telegram Bot API, Google Calendar and deployed and hosted on OCI.* Leading the development of a specialized LLM application leveraging LangChain and RAG to transform static sports regulations into an interactive, natural language query system.

Mobile Applications (Google Play Store). Published seven Android apps, including games and utility tools (Impostor, Skein, Sushin, Altitude, Alertas VPO, El Rarito, LAMP). Built using Flutter (Dart), integrated with Firebase for analytics and authentication.

Personal Portfolio Website. Built and deployed a responsive portfolio to showcase projects and technical skills, with CI/CD to GitHub Pages. Using *React, Vite, Motion, GitHub Actions.* (View here)

Publications

Reengineering the architecture of ODIN (On-demand Data Integration) 2023
Published on UPC Commons (upcommons.upc.edu)

Musical geography of Hospitalet de Llobregat 2019
Winner of the *"City" Award of Hospitalet de Llobregat 2019*
Published at Museu de L'Hospitalet

Extra-Curricular Activities

Basketball Referee – FCBQ (Catalan Basketball Federation) 2018 – 2025

FEDDF (Spanish Federation of Sports for People with Physical Disabilities) 2022 – 2025
Licensed referee (#11584) at **Primera CABQ** and certified national referee in wheelchair basketball (**Honor División**). Officiated competitive and adaptive sports, strengthening **decision-making under pressure, conflict resolution, and leadership** skills. Transitioned in 2025 to focus on professional and personal development projects.

Accredited Table Official – FCBQ / FEB (Group 3) 2018 – 2023
Managed game statistics, timekeeping, and compliance with official regulations at regional and national basketball competitions.

Leisure and Free Time Monitor Course – Generalitat de Catalunya ID 156274
Completed certified training in leisure and free time education, focusing on teamwork, activity planning, and youth engagement.