



# Luis Quesada

## Senior Engineering Manager

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**SUMMARY** 26+ years coding, 21+ years managing systems, 11+ years in industry, and 7+ years managing people. Technical expertise in distributed systems and user-facing products, strategic vision, and can-do attitude. I drive fast, impactful solutions, tackling complex problems with wide consensus and innovation.

**SKILLS** Systems: Architecture, performance, automation, monitoring, load balancing, capacity, and data integrity. Artificial Intelligence: Infrastructure and solutions, applied Generative Multi-modal Models. Computer Languages: Go, Java, Python, JavaScript, TypeScript, PHP, Bash shell script, and SQL. People: Organization design, career development, team health, coaching, presentation, and negotiation. Languages: Spanish (Native), English (C2), German (B2), Swiss German (B1), and Esperanto (B1).

**EXPERIENCE** Google, 2014 – currently

**YouTube Infrastructure, Software Engineering** — Senior Engineering Manager (L7)

- Improved the performance of high-throughput pipelines by 1000x. **Award:** Performance Excellence
- Extended an internal product with generalization and a customization framework to streamline onboarding of new use cases with limited engineering effort. **Award:** Engineering Excellence
- Developed infrastructure to run Large Language Models and integrated them to significantly increase the expressiveness of existing tooling. **Award:** Feature Excellence

**Cloud Artificial Intelligence, Site Reliability Engineering** — Senior Engineering Manager (L5→L7)

- Revamped capacity, monitoring, rollouts, data integrity, and frameworks across the entire developer organization, garnering top-down support, influencing the work of 50+ engineers, and leading the delivery, which improved the velocity, efficiency, and reliability of tens of products and >1K engineers. **Awards:** Cloud + Core + Google Tech Impact, Perfy, Tech Debt Busters, Tech Debt Busters
- Led the productionization of three large Cloud Artificial Intelligence products across reliability, scalability, security, and process requirements, and enabled their launch.

**Datacenter Software, Site Reliability Engineering** — Technical Leader/Engineering Manager (L5)

- Took over a project to revamp critical datacenter systems and landed it one year ahead of time.
- Troubleshoot and addressed incidents with company-wide impact as part of on-call responsibilities.

**Apps Storage, Site Reliability Engineering** — Technical Leader (L4→L5)

- Improved the availability and efficiency of an internal storage system by implementing an A/B-testing solution and integrating it in the rollout with push-on-green capabilities.
- Responsible for the resource provisioning and capacity management of the storage backends of products with >1B external users. Developed, tested, and deployed a forecasting and provisioning model that led to significant resource savings and increased reliability.
- Led company-wide migration to a new storage service. **Award:** Feats of Engineering
- Responded to time-critical user-facing outages as part of deeply technical on-call responsibilities.
- Planned and performed high-risk high-complexity operations on live systems without downtime.

## ACADEMIA University of Granada, 2010 – 2014

### Department of Computer Science and Artificial Intelligence — Research Fellow

- Developed an on-the-fly compiler of compilers that takes as input a model consisting of Java classes and resolves ambiguities by applying syntactic constraints, semantic constraints, and probabilities.
- Researched model-based compilers applications to multilingual Natural Language Processing and to language prototyping.
- Directed a Master Thesis on a language for music prototyping. **Award: Best Thesis (as director)**
- Developed an unsupervised markerless 3-degree-of-freedom real-time motion tracking technique that runs on a single low-budget camera.
- Taught courses on Knowledge Engineering and Artificial Intelligence Models.
- Mentored two students doing software engineering internships at software companies.

## STUDIES University of Granada, 2004 – 2010

*Master in Research, Soft Computing and Intelligent Systems.* GPA 9.3/10.

- Developed lexical analyzers and parsers with ambiguity support for model-driven data mining.

*Bachelor of Science, Information Systems Engineering.* GPA 8.7/10. **Award: First of Class**

*Master of Science, Computer Science.* GPA 9.2/10. **Awards: First of Class, National Award, Honors**

- Developed a Java code similarity detector that applies heuristics and aggregation at bytecode level and applied it to successfully identify plagiarised Java code. **Award: Best Thesis**

*Bachelor of Science, Computer Systems Engineering.* GPA 8.7/10. **Award: First of Class**

## CERTIFICATES Artificial Intelligence

- Professional Certificate on Generative Artificial Intelligence Engineering — Coursera / IBM, 2024
- Professional Certificate on Artificial Intelligence Development — Coursera / IBM, 2024

### Cybersecurity

- Professional Certificate on Cybersecurity — Coursera / Google, 2024
- CERTYRED Professional Certificate on Security — University of Salamanca, 2011
- Introduction to Auditing of Information Systems — University of Salamanca, 2010
- Security of Networked Information Systems — University of Granada, 2010

### User Experience

- Professional Certificate on User Experience Design — Coursera / Google, 2024

### Music

- Modern Musician Specialization — Coursera / Berklee College of Music, 2014
- Grade 5 Music Theory — The Associated Board of the Royal Schools of Music, 2013
- Grade 4 Singing — The Associated Board of the Royal Schools of Music, 2013

## PUBLICATIONS Distributed Systems

- Published a [tech talk](#) and an [article](#) on capacity management
- Published a tech talk on [Google's production environment](#)
- Published a tech talk on [the Paxos algorithm](#)

## Generative Artificial Intelligence

- Developed ComfyUI nodes for [inpainting only on masked area](#)
- Developed ComfyUI nodes for [interactive user interface](#)
- Developed ComfyUI nodes for [prompt combination and gallery generation](#)

## Computer Vision

- [Designed](#) and [developed](#) a 3D motion tracking solution that works on a single camera

## Language Processors

- [Designed](#) and developed [lexical analyzers](#), [parsers](#), and a [model compilers](#) with ambiguity support
- [Designed](#) and [developed](#) parallel finite state machines for fast ambiguity-supporting lexical analysis
- Designed a [domain-specific language for music prototyping](#)

## Reverse Engineering

- Decompiled a Java splicer and extended it with a [command-line interface](#)
- Developed a [Java bytecode similarity detector](#)
- Developed a [manifest-based run-time subclass finder](#) for Java
- Developed a [tool to extract the Voxatron virtual console player](#) into a stand-alone web

## Network

- Developed several [mIRC scripts](#) on network exploration, hardening, and applications

## Video games

- Developed a [rogue-like videogame](#) in JavaScript with no frameworks
- Developed a [web-based multiplayer videogame](#) in PHP+MySQL, with >10K players in the 2000s
- Developed an [arcade maze videogame](#) in Java
- Developed a [physics engine and 3D world videogame prototype](#) in Java
- Developed a [top-down shooter videogame](#) in GameMaker
- Developed a [shooter videogame](#) in C for the Game Boy Advance console
- Developed a [dungeon videogame prototype](#) in Java with custom physics and graphic engines
- Developed a [physics engine and basic taxonomy](#) in GameMaker
- Developed a [dungeon videogame prototype](#) in Go with custom physics and inventory engines
- Developed a [mini-game](#) for the Voxatron virtual voxel-based console
- Proposed [hardware for voxel-based 3D object modeling](#)

## Team Management

- Co-authored an O'Reilly book chapter on [managing team overload](#)

## Language Learning Resources

- Aggregated a [dictionary across five languages](#)

## Literature

- Authored Spanish books for children on [monsters](#), [school anecdotes](#) and [science fiction](#)

## Music

- Produced indie rock albums: [Crossing Lines](#) and [Years Away](#)
- Produced synthesizer albums: [Touching Point](#) and [Last Transmission](#)
- Produced piano albums: [Simple Piano](#) and [Transitions on Piano](#)
- Produced [several alternative rock albums](#) using generative artificial intelligence.