



Lluís Suñol Juliachs

Senior Software Engineer
Integrating AI/ML · Quantum Era

CONTACT

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KEY SKILLS

PROGRAMMING

- Java
- Python
- JavaScript
- SQL
- NoSQL

FRAMEWORKS & TOOLS

- Spring Boot
- Docker
- Hibernate
- ElasticSearch
- Node.js
- AngularJS
- FastAPI

ARTIFICIAL INTELLIGENCE

- PyTorch
- TensorFlow/Keras
- Scikit-learn
- CNNs
- LLMs
- Generative AI
- Hugging Face

ADDITIONAL TECHNOLOGIES

- HTML
- CSS
- Thymeleaf
- Maven
- Shell scripting
- Apache
- Tomcat

QUANTUM

- Quantum computing (foundations)
- Qiskit (IBM)

OTHER

- Git
- Linux
- Scrum
- DevOps
- Technical Product Owner
- Database sharding
- Financial knowledge

CERTIFICATIONS

MongoDB for Java Developers (25h)
2016

Spring Framework (25h)
2017

PROFESSIONAL SUMMARY

Senior Software Engineer with 20 years of experience in developing Java and web applications, with strong knowledge of the financial sector and its regulatory requirements. Solid background in backend and database optimization, with practical experience in Python.

Currently transitioning into Artificial Intelligence and Machine Learning after completing postgraduate studies in AI and Quantum Engineering. Seeking to contribute to AI-driven projects by combining extensive software engineering expertise with recent training in deep learning and ML, and with awareness of the transformative impact of the upcoming quantum era.

REMARKABLE PROJECTS / ACHIEVEMENTS

Postgraduate Project – Artificial Intelligence with Deep Learning (2025)

Designed and implemented an image inpainting pipeline using Stable Diffusion and LoRA, simulating object removal in real estate images. Included background/foreground segmentation and evaluation with PSNR, SSIM, LPIPS, and FID metrics. Demonstrated ability to apply state-of-the-art AI models to practical use cases.

🔗 <https://github.com/lsunol/casalimpia>

ATLAS Project – AI applied to Transport & Logistics

Final project of the postgraduate program on Artificial Intelligence applied to Transport and Logistics. Built an intelligent system capable of predicting loads, weight, and expected profit for each shipment using XGBoost models, and of optimizing truck assignments with a knapsack-style algorithm. Includes a Python backend, interactive visualization, and a fully deployed web demo.

🔗 <https://github.com/lsunol/atlas>

🔗 <https://atlasproject.duckdns.org/>

Background Remover AI – Background removal with Hugging Face models

Full-stack web app to remove image backgrounds using the RMBG-1.4 and RMBG-2.0 models from Hugging Face. Lets users upload an image, visually compare both model results, and download the processed version with transparent background. Built with a FastAPI (Python 3.11) backend, a Vue 3 + TypeScript + Tailwind CSS frontend, and a Dockerized deployment with Dockerfile + docker-compose, using volumes to cache models and health checks to supervise the service.

🔗 <https://github.com/lsunol/background-remover-ai>

🔗 <https://aibgremover.lluissunol.duckdns.org/>

Sabadell Consumer Finance / InstantCredit – Integrated financing platform

Development of a consumer-finance web application covering backend, frontend, and every integration with banking systems. Responsible for the full Dockerization and

LANGUAGES

Catalan	Native
Spanish	Native
English	Fluent
French	Intermediate
Italian	Intermediate

deployment automation, helping the product evolve into InstantCredit's flagship solution, later acquired by Banco Sabadell.

PROFESSIONAL EXPERIENCE

Career Break (2024–2025)

Planned career break focused on advanced training and professional transition into Artificial Intelligence. Completed three postgraduate programs at Universitat Politècnica de Catalunya (UPC): Artificial Intelligence with Deep Learning, Quantum Engineering, Artificial Intelligence applied to Transport and Logistics.

Sabadell Consumer Finance / Instant Credit (2018–2024)

Active development of InstantCredit platform (Java, AngularJS, MySQL, Docker, ElasticSearch). Integration into Banc Sabadell ecosystem. Responsibilities across feature design, performance, incident handling & reporting. Focus on containerization and database scaling (sharding approaches).

Agile Content (2013–2018)

Worked on Agile CMS for major media clients. Developed Agile Media Player (JavaScript) with ad serving & analytics; Spring Boot services (Translator, Redirect). Improved DB performance (Oracle/MySQL). Stack: Java, JavaScript, Spring Boot, MySQL, MongoDB, Oracle, Node.js, Maven, Shell.

VASS (2010–2013)

Web sites for La Caixa, Generalitat de Catalunya, Ajuntament de Barcelona. Built CMS for Generalitat on OpenCMS. Stack: Java, JSP, JSTL, HTML/CSS, XML+XSL.

Same S.I. (2008–2010)

HP Fleet Control Tool (C++, SNMP, HTTP, Telnet, SSH). Custom Java embedded printer solutions. Stack: C++, Java, XML+XSL.

LCFIB (2006–2008)

Projects for Generalitat: SAGA & e-Catalunya (Java). Built wiki engine from scratch. Stack: Java, Hibernate, SQL, Velocity, HTML, JS, CSS, Apache.

EDUCATION

Postgraduate – AI applied to Transport & Logistics, UPC (2024–2025)

375 hours

Completed program focused on artificial intelligence applications in logistics and digital transformation. Covered machine learning methods applied to transport, mobility, supply chain, and critical infrastructures, with sustainability and ethics perspective in AI.

 <https://github.com/lsunol/atlas>

 <https://atlasproject.duckdns.org/>

Postgraduate – Artificial Intelligence with Deep Learning, UPC (2024–2025)

375 hours

Program focused on deep neural networks with global industry recognition. Hands-on experience with PyTorch implementations and solid theoretical foundation covering computer vision, natural language processing, and AI opportunities and limitations.

 <https://github.com/lsunol/casalimpia>**Postgraduate – Quantum Engineering, UPC (2024–2025)**

375 hours

Study of quantum physics applications to technology development. Focus on quantum computation, communications, cybersecurity, and sensing with potential impacts in chemistry, biology, medicine, and AI.

 <https://github.com/lsunol/transmitingaqubit>**Executive Master in Innovation, EOI (2015)**

265 hours

Executive program focused on innovation management and technology-economic knowledge. Final grade: 9/10. Tools for successful innovation management within business environments.

Master in Information Technologies, UPC (2006–2007)

Advanced studies in information technologies and software engineering. Continuation of informatics engineering studies at FIB-UPC.

Bachelor in Computer Engineering, UPC (2001–2007)

Computer engineering studies with focus on software engineering. Comprehensive foundation in programming, algorithms, databases, and software development methodologies.