

# Luis Felipe Llamas Luaces

## Senior Backend Specialist

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Backend engineer, from robotics research to production data and LLM systems.

I started in educational robotics: my final degree project became my first job at a university spin-off, and then a PhD position in a research group. It was a multidisciplinary project, and it taught me to pick up new technologies quickly, from Android and iOS to computer vision and simulators.

## EXPERIENCE

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Feb 2026 – Present

### **Redegal · Senior Backend Specialist and AI Governance Commission member**

Same backend work, plus management duties in Product / R&D. Representative of the product department on the AI Governance Commission since it was set up.

Jun 2022 – Mar 2026

### **Redegal · Backend Engineer**

Main backend engineer of Redegal's data-driven marketing and analytics tools Binnacle and Boostic, and of the backend of the ATaquilla CMS.

- Designed and built Binnacle and Boostic from scratch to production in one year, then kept adding features: dynamic dashboard generation from the backend and LLM integration for data analysis and report generation.
- The tools are used by Redegal's own marketing team and by external clients.
- Mentored new backend team members and reviewed their code.
- Coordinated with the Data Science and Frontend teams, introducing a shared documentation system and the protocols to use it.
- Designed and built the ATaquilla CMS backend from scratch to production within the agreed timeframe, working with the client's software, marketing and operations teams.

Nov 2021 – May 2022

### **University of A Coruña · Pre-doctoral Researcher**

Perception systems in cognitive robotics, as part of doctoral studies.

Nov 2020 – Nov 2021

### **UDC – Navantia Joint Research Unit · Researcher**

Prototype that uses genetic algorithms to redesign the closing pipes of ships under construction.

- Designed and implemented a prototype to improve the fitting and adjustment of pipes in ships under construction.
- Used genetic algorithms (Python) to redesign the pipe layouts that, because of real-world assembly deviations, did not meet fitting tolerances.
- Worked with the pipe workshop and metrology lab engineers; combined with 3D scanners, the prototype shortened measurement and design times and prevented errors.

Jul 2020 – Nov 2020

### **CITIC Research Centre, University of A Coruña · Researcher**

New machine vision techniques for the Robobo educational robotics platform.

Apr 2019 – Jul 2020

### **UDC – Navantia Joint Research Unit · Researcher**

Pipe fitting research for the Navantia shipyard: analysis of solutions to measure assembly deviations.

Jan 2019 – Apr 2019

### **Integrated Group for Engineering Research (GII) · Software Engineer**

Robobo educational robotics platform: new interaction modules and the iOS port.

Oct 2016 – Dec 2018

### **Mytech Ingenieria Aplicada · Software Engineer**

Built the sensing and actuation framework of the Robobo educational robotics platform, continuing my final degree project.

## PROJECTS

|                                  |                                                                                                                                                                                                             |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main backend engineer            | <b>Binnacle / Boostic</b><br>Backend of Redegal's data-driven marketing and analytics tools.<br>Python, Flask, Prompt engineering, PostgreSQL, ClickHouse, Docker, Auth0, LangChain, LangGraph, SQL, Pandas |
| Main backend engineer            | <b>ATaquilla</b><br>Custom CMS for ATaquilla's marketing team to edit public event content.<br>Python, Flask, Kubernetes, PostgreSQL, Keycloak, Alembic                                                     |
| Researcher                       | <b>Pipe Fitting</b><br>Prototype using genetic algorithms to redesign closing pipes so they fit as-built ship modules at Navantia.<br>Python, Genetic algorithms, wxPython, NumPy, PyGAD                    |
| Software engineer and researcher | <b>Robobo Platform</b><br>Software framework of a smartphone-based educational robotics platform.<br>Android, iOS, OpenCV, Python, JavaScript, Unity                                                        |

## PUBLICATIONS

|      |                                                                                                       |
|------|-------------------------------------------------------------------------------------------------------|
| 2019 | Artificial Intelligence Teaching Through Embedded Systems: A Smartphone-Based Robot Approach Springer |
| 2019 | Adapting computer vision algorithms to smartphone-based robot for education IEEE                      |
| 2017 | The Robobo Project: Bringing Educational Robotics Closer to Real-World Applications Springer          |

## EDUCATION

|                     |                                                                                          |
|---------------------|------------------------------------------------------------------------------------------|
| Nov 2019 – Jun 2022 | <b>PhD, Cognitive Robotics (not completed)</b><br>UDC                                    |
| Sep 2016 – Jul 2018 | <b>Master's Degree, Bioinformatics for Health Sciences (Neuroscience focus)</b><br>UDC   |
| Sep 2011 – Aug 2016 | <b>Engineering Degree, Computer Engineering (specialized in computer science)</b><br>UDC |

## VOLUNTEERING

|                     |                              |
|---------------------|------------------------------|
| Feb 2020 – Sep 2023 | <b>Bricolabs · President</b> |
| Apr 2013 – Present  | <b>Bricolabs · Member</b>    |

## SKILLS

|                      |                                                                            |
|----------------------|----------------------------------------------------------------------------|
| Python Development   | Flask, numpy, pandas, Poetry, marshmallow, pydantic                        |
| Software Engineering | Modular design, REST API design, Testing (pytest)                          |
| DB Management        | PostgreSQL, ClickHouse, ORM, SQLAlchemy, SQL, Alembic                      |
| DevOps               | git, Docker, Docker Compose, Kubernetes, Elastic, Linux, Redis, make, bash |
| Mobile Development   | Android, iOS                                                               |
| AI and LLMs          | LangChain, LangGraph, MCP, Claude, Prompt engineering                      |
| Languages            | Spanish, English                                                           |

## INTERESTS

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|-------------|--------------------------------------|
| Music       | Guitar, Bass, Piano, Drums           |
| Electronics | Robotics, IoT, Ham radio             |
| Crafts      | Woodworking, Metalworking, Jewellery |
| Arts        | Drawing, Painting                    |
| Sports      | Mountain biking                      |