



# Luís Ribeiro

Software Engineer



## ABOUT ME

Software Engineer and Architect with a strong focus on software configuration and safety-critical systems. Passionate about applying Formal Methods to bridge theory with real-world software development.

I am always open to new opportunities and committed to continuously expanding my skills and expertise.

## PERSONALITY

- Enthusiastic and proactive team contributor
- Reliable and accountable
- Motivated by teaching and mentoring

## INTERESTS

- Formal Methods
- Embedded Systems

## WORK EXPERIENCE

### Research Collaborator @INESCTEC

March 2022 - August 2022

- Applied model-checking to detect inconsistencies and improve system robustness.
- Demonstrated how formal methods can enhance the dependability of any distributed system.

**Skills:** Alloy, TLA+, Researching

### Software Engineer & Architect @Bosch

February 2023 - now

- Architect for an entire software cluster, contributing to the development and maintenance of safety-critical software for the airbag system.
- Primary owner and point of contact for software configuration management.
- Delivered hands-on training on configuration management and pure::variants to more than 100 colleagues across the organisation.
- Supported and coached regional teams on the modelling and requirement engineering.
- Regional process expert, successfully conducting process assessments and driving continuous improvement initiatives.
- Successfully applied model-checking techniques to validate the functional behaviour of the airbag system, significantly improving its correctness and reliability.

**Skills:** pure::variants, SysML, TLA+, C

## HOBBIES

- Sports fan who's always up for a game — and usually won't say no to a beer on the side.
- Reader of all sorts, with a soft spot for philosophy.
- Photography enthusiast, especially fond of film cameras.

## EDUCATION

### Software Engineering @Universidade do Minho

2017-2022

**MSc Degree:** Formal Methods and Language Processing

- Developed a strong understanding of operating systems and distributed computing.
- Designed and implemented mobile and web applications, integrating REST APIs and modern development frameworks.
- Engineered language processing solutions, including lexical and parsing analysers.
- Mastered formal modeling and verification techniques, applying mathematical rigor to software correctness.

## MAIN PROJECTS

- portourgal: Mobile app to showcase routes and monuments across Portugal.
- CocktailDB: Web app to showcase cocktails with interactive UI.
- svROS: Command-line tool for verification of ROS-based systems using model-checking.

### Software Architecture Certification @iSAQB

December 2025

- Learned about the foundations of software architecture and design.
- Completed the "iSAQB Certified Professional for Software Architecture - Foundation Level" certification.