

# João Paulo Souza Ferrete

Tech Lead | Software Engineer (IoT & Backend)

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## PROFESSIONAL SUMMARY

Software Engineer and Tech Lead for the IoT Video team at Cobli. My journey at the company started as an intern, where I participated in building the Video Telemetry product from its early stages. Today, I provide technical leadership to the squad, focusing on backend architecture, scalability, team mentorship, and the technical interface with international vendors to align on new devices. My technical foundation comes from Computer Science at UFES, with a strong background in algorithms (Competitive Programming and Operations Research) and leadership of large events (ENCOMP). I am passionate about transforming complex IoT and video challenges into efficient and scalable software.

## PROFESSIONAL EXPERIENCE

### Software Engineer II & Tech Lead (IoT Video)

São Mateus (Remote) — Cobli

FEB 2025 - PRESENT

- **Technical Leadership:** Acting as Tech Lead for the Camera/IoT Video squad, responsible for architecture definition, code review, and management of technical team demands.
- **Real-Time Architecture:** Development of new services for real-time communication between embedded hardware and backend, ensuring low latency in video telemetry.
- **Backend Development:** Creation and maintenance of scalable microservices using Kotlin, Java (Spring Boot), Golang, and Python.
- **Data Processing:** Implementation of stream processing solutions with Apache Flink and maintenance of service infrastructure.
- **International Vendor Management:** Acting as the technical focal point with global partners, managing firmware demands, hardware homologation, and the resolution of complex impediments.

### Software Engineer I

São Mateus (Remote) — Cobli

JAN 2024 - JAN 2025

- **Backend Development:** Building and maintaining critical microservices for IoT Video in a polyglot environment (Kotlin, Java, Golang, Python).
- **Data Processing:** Implementation of data pipelines using Apache Flink and Scala.
- **Infrastructure:** Responsible for infrastructure maintenance, ensuring video ingestion availability and stability.
- **Internal Tools:** Development of administrative and support interfaces using React Admin.

## SKILLS

**Programming Languages:**  
Kotlin, Java, Python, Go (Golang), C++, C, Scala, PHP, TypeScript, and JavaScript.

**Backend & Frameworks:**  
Spring Boot, Laravel, Apache Flink, Microsserviços, APIs REST.

**Frontend & Web:**  
React Admin, HTML5, CSS3.

**Data & Infrastructure:**  
SQL, Linux, Docker, Git.

**Business Domains:**  
IoT (Internet of Things), Video Telemetry, Real-time Data.

**Leadership & Management:**  
Technical Leadership, Agile Team Management, Developer Mentorship, Software Architecture.

**Problem Solving:**  
Algorithmic Thinking, Performance Optimization, Complex Systems Analysis.

## LANGUAGES

Portuguese: Native  
English: Intermediate

## Software Engineering & Embedded Systems Intern

São Mateus (Remote) — Cobli

AUG 2022 – DEC 2023

- Fullstack Development: Direct involvement in creating the Video Telemetry product, developing Backend (Kotlin, Java, Python, Go) and Frontend (React, TypeScript).
- R&D: Technical support in drafting commercial proposals and researching solutions for embedded systems.
- Infrastructure: Assisting in microservices configuration and development environment setup.
- Technical Versatility: Experience in a polyglot environment, learning and applying multiple languages and frameworks (Spring Boot) to solve real-world problems.

## Development Manager

São Mateus — Adapti Soluções Web - Junior Enterprise

AUG 2022 – OCT 2022

- Team Management: Leadership of a development squad, responsible for task allocation and deadline tracking.
- Fullstack Development: Technical role in projects using PHP (Laravel), HTML, CSS, and JavaScript.
- Delivery Assurance: Responsible for ensuring software quality and meeting client requirements.

## Development Associate

São Mateus — Adapti Soluções Web - Junior Enterprise

MAR 2022 – AUG 2022

- Web Development: Creation and maintenance of web systems using PHP and the Laravel framework.
- Front-end: Implementation of dynamic and responsive interfaces with HTML5, CSS3, and JavaScript.
- Project Execution: Direct involvement in coding custom solutions for clients, ensuring the functional delivery of requirements.

## EDUCATION

### Bachelor in Computer Science

São Mateus (CEUNES) — Federal University of Espírito Santo (UFES)

AUG 2018 – EXPECTED: MAR 2026

- Academic Focus: Solid foundation in Computer Science with an emphasis on advanced algorithms and software engineering.
- Teaching Assistantship: Acting as a Teaching Assistant for Data Structures and Functional Programming courses, assisting students in solidifying fundamental computing concepts.
- Scientific Initiation: Research in Combinatorial Optimization (Container Loading Problem), developing heuristics in C++ for high-complexity problems.
- Competitive Programming: Active participant in Programming Contests (SBC), developing agile problem-solving skills in logic and mathematics.
- Leadership and Organization (VI ENCOMP): Vice-General Chair of the largest computing event in northern Espírito Santo, leading secretariat and infrastructure teams with a focus on people management and large-scale logistics.

### Technician in Mining (Integrated High School)

Nova Venécia — Federal Institute of Espírito Santo (IFES)

FEB 2014 – DEC 2017

- Integrated Education: Technical high school with a focus on industrial processes and geology.
- Technical Foundation: Development of logical reasoning and a solid foundation in exact sciences during secondary education.

### Computer Assembly and Network Maintenance

Eunápolis — Microlins

JUN 2012 – JUN 2013

- Basic Infrastructure: Vocational course focused on hardware, computer assembly, and local network configuration, marking the start of my technical journey in IT.