

# ELIÃ RAFAEL DE LIMA BATISTA

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*PhD Candidate in Informatics at University of Lugano (USI)*  
6963 Pregassona, TI, Switzerland

## EDUCATION

### University of Lugano (USI)

*PhD in Informatics*

Lugano, Switzerland

2021 – Feb 2026

### PUC-RS

*MSc in Computer Science*

Porto Alegre, Brazil

2018 – 2020

### PUC-RS

*BSc in Computer Science*

Porto Alegre, Brazil

2006 – 2011

## PROFESSIONAL SUMMARY

Software engineer and researcher with over **15 years** of experience designing and implementing high-performance software and fault-tolerant systems. Currently a **Ph.D. candidate** and researcher at University of Lugano (USI), specializing in distributed systems. Proficient in **Java, Go, Python, C, and Linux environments**, with hands-on experience managing clusters and optimizing large-scale distributed applications. Former **Senior Software Developer** leading **full-stack** projects using **React** and **Node.js**. Passionate about building scalable, reliable software that bridges advanced research with real-world applications.

## PROFESSIONAL EXPERIENCE

### Research and Development

*University of Lugano (USI)*

2021 – Feb 2026

Lugano, Switzerland

- Conducted **research and development** in distributed dependable systems using **Java, Go, Python, C, and Bash on Linux** environments.
- Administered a **Linux cluster** supporting experimental distributed systems.
- Developed core SMR components and multicast algorithms focusing on **performance** and **fault tolerance**.
- Authored and reviewed papers for top distributed systems conferences.
- Teaching assistant** for Operating Systems, Systems Programming, and Distributed Algorithms courses.

### Senior Software Developer

*Compasso UOL*

2017 – 2020

Brazil, RS

- Led the development of scalable full-stack web applications using **ReactJS** and **Node.js**, contributing to architecture decisions and continuous integration workflows.
- Built and maintained cross-platform mobile applications with **React Native**, integrating secure and performant **RESTful APIs** for enterprise clients.
- Collaborated with UI/UX designers to implement responsive, user-centric features, improving engagement and usability across platforms.
- Contributed to Agile processes (SCRUM), code reviews, and mentoring of junior developers in modern JavaScript and mobile best practices.

<b>System Analyst</b>	2014 – 2017
<i>Bem Promotora</i>	<i>Brazil, RS</i>
<ul style="list-style-type: none"> <li>Developed and maintained ERP modules for a credit payroll loan financial company linked to Banrisul, a major bank in Southern Brazil</li> <li>Analyzed, documented, and communicated new system features to the development team to improve business process efficiency</li> <li>Implemented complex business rules and data processing using <b>SQL Server</b> stored procedures for accurate loan management and reporting</li> <li>Interacted closely with stakeholders to analyze requirements, define features, and ensure alignment with financial regulations and business needs</li> </ul>	
<b>Software Developer</b>	2010 – 2013
<i>DBServer</i>	<i>Brazil, RS</i>
<ul style="list-style-type: none"> <li>Developed and customized ERP modules using <b>Microsoft Visual Basic</b> tailored for a major fuel retail network (Ipiranga) in Brazil, improving operational efficiency and sales tracking</li> <li>Integrated and managed backend logic with <b>SQL Server</b> for efficient data storage and retrieval</li> </ul>	
<b>Software Developer</b>	2008 – 2010
<i>Vensis</i>	<i>Brazil, RS</i>
<ul style="list-style-type: none"> <li>Built and maintained general-purpose ERP modules with <b>Microsoft Visual Basic</b>, adaptable for various enterprise environments</li> <li>Optimized <b>SQL Server</b> queries and stored procedures to boost system performance and data consistency</li> </ul>	

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## ACADEMIC PUBLICATIONS

Michele Cattaneo; Eliã Batista; Fernando Pedone. ***B+AVL trees: towards data structures for robust and efficient blockchain state synchronization.*** Proceedings of the 44th International Symposium on Reliable Distributed Systems, Porto, Portugal, 2025.

Eliã Batista; Paulo Coelho; Eduardo Alchieri; Fernando Dotti; Fernando Pedone. ***FlexCast: Genuine Overlay-based Atomic Multicast.*** Proceedings of the 24th International Middleware Conference, Bologna, Italy, 2023.

Eliã Batista; Eduardo Alchieri; Fernando Dotti; Fernando Pedone. ***Early Scheduling on Steroids: Boosting Parallel State Machine Replication.*** Journal of Parallel and Distributed Computing, Volume 163, May 2022.

Eliã Batista; Eduardo Alchieri; Fernando Dotti; Fernando Pedone. ***Resource Utilization Analysis of Early Scheduling in Parallel State Machine Replication.*** Proceedings of the 9th Latin-American Symposium on Dependable Computing, Brazil, 2019.

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## SKILLS

**Languages:** English (fluent), Italian (intermediate), Portuguese (native)

**Programming Languages:** Java, Go, Visual Basic, JavaScript

**Frameworks & Methodologies:** React, Node.js, Next.js

**Developer Tools & Platforms:** Git, Maven, Gradle, REST APIs

**Databases & Storage:** SQL Server, PostgreSQL, MongoDB, Firebase DB

**Distributed Systems:** State Machine Replication, Consensus, Paxos, Atomic Multicast