

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) <i>PhD in Informatics</i>	Lugano, Switzerland 2021 – Feb 2026
PUC-RS <i>MSc in Computer Science</i>	Porto Alegre, Brazil 2018 – 2020
PUC-RS <i>BSc in Computer Science</i>	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 <i>University of Lugano (USI)</i>	2021 – Feb 2026 Lugano, Switzerland
<ul style="list-style-type: none">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 <i>Compasso UOL</i>	2017 – 2020 Brazil, RS
<ul style="list-style-type: none">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.	

System Analyst

2014 – 2017

Bem Promotora

Brazil, RS

- Developed and maintained ERP modules for a credit payroll loan financial company linked to Banrisul, a major bank in Southern Brazil
- Analyzed, documented, and communicated new system features to the development team to improve business process efficiency
- Implemented complex business rules and data processing using **SQL Server** stored procedures for accurate loan management and reporting
- Interacted closely with stakeholders to analyze requirements, define features, and ensure alignment with financial regulations and business needs

Software Developer

2010 – 2013

DBServer

Brazil, RS

- Developed and customized ERP modules using **Microsoft Visual Basic** tailored for a major fuel retail network (Ipiranga) in Brazil, improving operational efficiency and sales tracking
- Integrated and managed backend logic with **SQL Server** for efficient data storage and retrieval

Software Developer

2008 – 2010

Vensis

Brazil, RS

- Built and maintained general-purpose ERP modules with **Microsoft Visual Basic**, adaptable for various enterprise environments
- Optimized **SQL Server** queries and stored procedures to boost system performance and data consistency

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.

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