Galileu Santos
Software Engineer

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About Me

Software Engineer with 8+ years building scalable backend systems and data architectures. Led engineering teams in designing distributed systems that reduced video processing latency by implementing intelligent caching and AI-powered solutions for automated SQL generation. During COVID-19, architected national-scale data pipelines processing millions of health records for real-time analytics, directly impacting public health decisions. Expert in Java, Scala, Python, Elixir/Erlang, cloud architectures (AWS), and modern data engineering tools (Airflow, Spark). Former Google Education Specialist who trained 10,000+ professionals in technology adoption. Proven track record of transforming complex technical challenges into elegant, performant solutions while mentoring engineers and establishing engineering excellence.

Education

PhD in Computer Science, Software Engineering. *Universidade Federal de Pernambuco*. **2020—2025**
Thesis: *A Lightweight Technique for Detecting Semantic Conflicts in Merge Scenarios with Static Analysis* Recife, Brazil
MSc in Computer Science, Software Engineering. *Universidade Federal de Sergipe*. **2016—2017**
Thesis: *Improving message error handling in Python for beginners programming* São Cristóvão, Brazil
BSc in Computer Science, Software Engineering. *Universidade Federal de Sergipe*. **2012—2015**
Monograph: *A mobile application for learning programming languages* São Cristóvão, Brazil

Work Experience

Tech Lead – Backend & Distributed Systems **Jul 2025 - Present**
Quantum Leap *Setúbal, Portugal (Remote)*

- Led backend engineering team through critical architectural transformations.
- Solved video processing latency issues by implementing intelligent caching systems.
- Pioneered AI-powered solutions for automated SQL generation and data visualization.
- Built comprehensive monitoring infrastructure with Prometheus/Grafana for improved system observability.
- Restructured team organization while mentoring engineers and establishing best practices.
- Architected distributed systems leveraging Elixir/Erlang, RabbitMQ, and MQTT for reliable event-driven architectures on AWS.

Senior Data Specialist **Apr 2023 - Jun 2025**
Ministry of Health of Brazil *Brasília, DF, Brazil (Remote)*

- Designed and optimized national-level data pipelines for public health analytics.
- Led the implementation of scalable solutions using Python, SQL, Superset, Airflow, and Spark to support real-time decision-making during health crises.
- Contributed to the strategic integration of data across systems to enhance reporting and policy formulation.

Back-end Developer **Aug 2022 - Mar 2023**
Stone Co. *Rio de Janeiro, Brazil (Remote)*

- Worked as a backend developer using the Elixir programming language.
- Assisted in structuring Payment Account Settlement, creating dashboards and reports for incident identification.

Data Engineering Lead **Mar 2020 - Aug 2022**
LAIS - Laboratory of Technological Innovation in Health *Rio Grande do Norte, Brazil (Part-time Remote)*

- Responsible for data analysis and health systems forecasting.
- Analyzed COVID-19 data, assisting decision-making in various states of Brazil.
- Served as the backend leader for some solutions developed in Python using Django.

Google Certified Trainer **May 2018 - Jun 2023**
Google for Education *Brazil*

- Traveled extensively across Brazil helping diverse institutions adopt Google solutions for educational and business transformation.
- Trained over 10,000 teachers, administrators, and corporate teams to optimize their workflows using Google Workspace tools.
- During the pandemic, played a crucial role in Brazil's digital education transformation, including partnering with the Brasília government to implement large-scale remote learning initiatives.
- Led workshops and training sessions nationwide, empowering educators to transition from traditional to digital classrooms.

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Director of Technology **Mar 2019 - Jun 2022**
Ensinar Tecnologia *Recife, Brazil (Part-time Remote)*

- Worked as a technology and innovation manager in educational projects across Brazil.
- Collaborated with companies like Google (implementation of the Google for Education program) and Microsoft (AcademIA Microsoft AI project).
- Responsible for all innovation management and customer support.

Substitute Professor **Jun 2017 - Nov 2017 and Apr 2018 - Mar 2020**
Federal University of Sergipe *São Cristóvão, SE*

- Computer Science professor, specializing in programming languages.
- Taught courses in Compilers, Formal Languages, Functional Programming, Imperative Programming, Object-Oriented Programming, Data Structures, and Fundamentals of Computing.

Director of Technology **Feb 2016 - Mar 2020**
COESI *Aracaju, Brazil*

- Served as the technology coordinator, helping to create robotics projects, teaching programming, and corporate solutions.

Computer Science Intern **Nov 2015 - Aug 2016**
Ministry of Labor Prosecution Office *Aracaju, Brazil*

- Gained experience in computer science applications within government operations.

Computer Science Intern **Apr 2015 - Oct 2015**
Correios *Aracaju, Brazil*

- Applied computer science knowledge in postal service operations and systems.

GRANTS AND AWARDS

14th Place in ICPC Brazilian Finals (International Collegiate Programming Contest)	2015
1st Place in Best Undergraduate Research Award	2014
State Gold Medal in XIV Brazilian Informatics Olympiad, Programming Level 2	2012
State Silver Medal in XIII Brazilian Informatics Olympiad, Programming Level 2	2011
State Gold Medal in XI Brazilian Informatics Olympiad, Programming Level 1	2009
48th Place (Top 50) in XI Brazilian Informatics Olympiad, National Level, Programming Level 1	2009
State Outstanding Student in X Brazilian Informatics Olympiad, Initiation Level 2	2008

TECHNICAL SKILLS

Tools and Languages (advanced knowledge)	Java, Scala, Elixir, Python, Pandas, Numpy, SQL, Git, Static Analysis, Soot
Tools and Languages (prior experience)	Docker, Phoenix, Spark, AWS (EC2, S3), MQTT, Kafka, Latex, Airflow, Linux/Unix
Communication	English (Advanced), Portuguese (Native), Spanish (Beginner)