# JOÃO PAULO DIAS VENTURA

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## RESUMO

Software developer focused on distributed systems and data-oriented applications, contributing to the development and evolution of critical systems within high-autonomy and lean-team environments. Experienced in high-volume processing, financial workflow automation, asynchronous communication, and scalable applications, actively contributing to technical decisions, architectural evolution, and operational optimization in production environments.

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## SPECIALIZATION

- Distributed systems and asynchronous communication
- Event-driven architecture
- Financial systems and transactional processing
- Large-scale data processing and pipelines
- Transactional consistency and concurrency control
- High-performance web interfaces (SSR/SSG, LCP/TTFB optimization)

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## TECHNICAL SKILLS

- *Backend: Node.js, Java, Golang*
- *Frontend: Angular, SCSS*
- *Databases: PostgreSQL, MongoDB*
- *Messaging & Queues: RabbitMQ, Redis*
- *Cloud & DevOps: AWS, CI/CD*

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## EXPERIÊNCIA PROFISSIONAL

***Mid-Level Developer - uFind Tecnologia / formerly Representa Online ( Jun 2025 - atual )***

Working within a lean and high-autonomy environment, directly contributing to the evolution of financial systems, data pipelines, and cloud architecture. Led the implementation of the billing workflow for a partner insurance brokerage, automating the processing of financial files with monthly transactions exceeding R$ 1,000,000. Developed stream-based pipelines structured with the Strategy Pattern to support multiple financial layouts in a decoupled and extensible manner, ensuring critical validations, traceability, and transactional consistency throughout the workflow. The automation reduced manual operations from days to minutes. Also contribute to the evolution of AWS infrastructure, helping define architecture and service standardization using ECS, S3, and IAM.

***Junior Developer - Representa Online ( Set 2024 - Mai 2025 )***

Contributed to the development of data pipelines focused on television media ingestion and processing, structuring workflows capable of processing more than 16GB of data consumed by AI models. Worked on the development of a real-time communication system integrated with the OpenAI API, using asynchronous architecture and resilient processing in Node.js, focusing on fault isolation, flow control, and operational stability.

***Software Developer - Representa Online ( Jun 2024 - Ago 2024 )***

Worked on the development of catalog features with a focus on performance and scalability. Implemented geospatial search with proximity-based ordering using the Haversine formula. Also contributed to JWT/OAuth2 authentication implementation and the development of SSR/SSG pages optimized for TTFB reduction and LCP improvement.

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## CASE STUDIES

***Auronix* - Digital Bank**

Domain-oriented modular financial platform designed with a focus on transactional integrity, traceability, and operational scalability. Implemented concurrency control for critical operations using Redis queues and PostgreSQL transactions to ensure consistency in financial workflows. Structured asynchronous business event processing and real-time communication through Server-Sent Events (SSE), prioritizing operational efficiency and service layer decoupling. The frontend was developed using Angular with SSR and performance-oriented optimization strategies focused on user experience.

***Modularis* - Modular Architecture and Monorepo**

Event-driven distributed architecture project built using NestJS, Spring Boot, Go, PostgreSQL, MongoDB, and RabbitMQ. Structured decoupled services with asynchronous communication, API Gateway, and saga-based distributed flows for onboarding and event processing. Also implemented webhook integrations with idempotency, retry, and fault-tolerance strategies. Contributed to infrastructure standardization and interoperability patterns using Docker and Nginx.

***GGCompress* - Compression and Archiving Engine**

Compression engine developed in Go, designed around pipeline-oriented and concurrent processing, focusing on deterministic integrity and high throughput. Designed the versioned .ggc format with manifest and chunk indexing, implementing parallel compression with goroutines and deterministic ordered writing. The project achieved throughput of up to 1.23 GB/s in benchmark scenarios involving 9.77 GB files. Also implemented checksum validation mechanisms, global SHA-256 verification, and secure extraction strategies using atomic operations and temporary isolation.

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## EDUCATION

- ***Fatec Osasco (Feb 2026 - Dec 2028):*** Multiplatform Software Development
- ***Etec Guarulhos (Feb 2023 - Dec 2025):*** Systems Development

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## CERTIFICATIONS

- Event-Driven Architecture Modeling ***(AWS)***
- Microservices Deployment on Amazon EKS ***(AWS)***
- Financial Services Industry Knowledge ***(MongoDB)***

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## LANGUAGES

- ***English*** - Advanced
- ***Portuguese*** - Native