

Rafael Ribeiro

SOFTWARE ENGINEER · BACKEND

São Paulo, Brazil

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“In theory there is no difference between theory and practice - in practice there is”

Summary

Software Engineer with a pivotal role at **Tendências Consultoria**. Proficient in **backend development**, **data**, and **machine learning**. Led the design and architecture of applications, ensuring alignment with business objectives. Instrumental in the backend development of the **Advisor tool**, an AI-powered add-in for Microsoft Word. Developed a robust API for client access, enhancing the platform's capability to analyze over 70,000 economic series. Streamlined Excel integration and deployed a centralized monitoring environment using **Grafana** and **Prometheus**.

Passionate about continuous learning, collaboration, challenges, and championing a *customer-centric* approach. Always eager to tackle complex challenges and explore new technologies.

Skills

| | |
|------------------------------------|--|
| Programming Languages | Python, Go, Javascript/Typescript, Java |
| Frameworks | FastApi, Spring Boot, Gin, Chi, React.js, Next.js, Tailwindcss |
| Database | PostgreSQL, MongoDB, Redis |
| DevOps & Infrastructure | Docker, Kubernetes, AWS, Azure, Terraform, Github Actions, Grafana, Prometheus |
| Languages | English and Portuguese |

Work Experience

Tendências Consultoria

São Paulo, Brazil

SOFTWARE ENGINEER

Sept. 2021 - Present

- Drove the design and architecture of new applications, aligning with business objectives and user needs.
- Built fully automated CI/CD pipelines on Github Actions for containerized applications using Docker, Azure Repositories and App services.
- Designed an overall service architecture and pipelines of the Machine Learning based Fashion Tagging API SaaS product with the micro-services architecture.
- Instrumental in the architectural design and backend development of the Advisor tool, a state-of-the-art AI-powered add-in for Microsoft Word aimed at enhancing document review and translation'
- Participated in the design and implementation of update services using cron jobs and contributed to the development of a robust API for client access and product integration. Enhanced the platform's capability to access, manipulate, and analyze over 70,000 economic series
- Collaborated on intuitive search functionalities and streamlined Excel integration. Leveraged the expertise of a top-tier consultancy to ensure optimal data projections and processing for efficient business decision-making.
- Deployed a centralized monitoring environment(Grafana, Prometheus) which gather system metrics as well as docker run-time metrics.

Univesp

São Paulo, Brazil

TEACHER ASSISTANT

Mar 2020 - Sep 2021

- Facilitated basic mathematics and algorithms classes, fostering a conducive learning environment.
- Assisted undergraduate students in various courses, providing guidance and mentorship.
- Supervised students in graduation projects, ensuring quality and adherence to academic standards.

Education

University Federal Fluminense

Rio de Janeiro

BACHELOR'S DEGREE IN COMPUTATIONAL PHYSICS

Mar. 2013 - Dec. 2018

- During this period, I gained a strong foundation in physics and computational methodologies.

University of São Paulo

Rio de Janeiro

MASTER'S DEGREE IN COMOSLOGY PHYSICS (INCOMPLETE)

Jan. 2019 - Jul. 2022

- Collaborated on the BINGO project, harnessing machine learning to map intergalactic distances.
- My expertise lies in analyzing astronomical data to derive cosmological parameters

Projects

Kafka-clone

KAFKA-CLONE: A SIMPLIFIED MESSAGE BROKER SYSTEM

- Developed a simplified message broker system similar to Kafka using Go.
- Implemented a distributed message system ensuring high availability and fault tolerance
- Designed a producer-consumer model to efficiently handle high-volume data streams
- [Link](#)

Material for Interviews

MATERIAL FOR INTERVIEWS: COLLECTION OF RESOURCES FOR TECHNICAL INTERVIEWS

- Curated a comprehensive collection of resources, including algorithms, data structures, and other technical topics, to aid in preparation for technical interviews.
- Organized resources into distinct categories, facilitating easy navigation and study.
- Continuously updated the repository based on feedback and emerging trends in technical interviews.
- [Link](#)

Jornada Milha API

JORNADA MILHA API: BACKEND APPLICATION FOR MANAGING TRAVEL DESTINATIONS AND TESTIMONIALS

- Developed a backend application to manage travel destinations and associated testimonials, integrating AI capabilities for automatic text description generation.
- Incorporated RESTful API design principles ensuring scalability and ease of integration.
- [Link](#)

Git-clone

GIT-CLONE: A SIMPLIFIED VERSION CONTROL SYSTEM

- Designed and developed a command-line interface tool simulating core functionalities of Git, offering a simplified version control system for developers.
- Simulated core Git functionalities like commit, branch, merge, status and log
- Developed an intuitive command-line interface for user interactions.
- [Link](#)

Writing

The BINGO Project III: Optical design and optimisation of the focal plane

University of São Paulo

AUTHOR

Jul. 2021

- Co-authored a study on the large-scale distribution of neutral hydrogen (HI) in the Universe, utilizing the Baryon Acoustic Oscillations from Integrated Neutral Gas Observations (BINGO) radio telescope to detect baryon acoustic oscillations through 21 cm intensity mapping.
- Employed machine learning techniques, specifically the GNILC method, to efficiently separate components and extract the cosmological signal from simulated data, optimizing the telescope's focal plane design and demonstrating results comparable to the standard principal component analysis method.
- [Link](#)

Medium Blog

Internet

AUTHOR

Jan. 2021 - PRESENT

- Regularly write about the Go programming language, emphasizing its **concurrency** model and best practices.
- Discuss Python programming, with a focus on its applications in various domains.
- Delve into computer algorithms, providing insights and explanations on their workings and implementations.
- Share knowledge on computer networking, including protocols, socket programming, and command-line tools.
- Cover topics related to system design, offering perspectives on building efficient and scalable systems.