Tales Vinicius Alves da Cunha

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Professional Summary

Backend Developer with a strong foundation in building scalable systems and solving complex technical challenges. Experienced in creating efficient APIs, optimizing performance, and designing robust architectures. Passionate about continuous learning and applying engineering best practices to deliver impactful solutions. Currently contributing to innovative backend projects at VTEX Lab.

Education

B.Sc. in Computer Science, Universidade Federal de Pernambuco (UFPE) 2023 - 2025

Relevant Coursework: Data Structures and Algorithms, Software Engineering, Artificial Intelligence, Database Design, Systems Architecture.

Skills

Programming Languages
Advanced Python, TypeScript; *Intermediate* C/C++, JavaScript, SQL; *Basic* Java;

Technologies & Frameworks
Backend: Node.js, NestJS, FastAPI, RESTful APIs, Microservices

Databases: PostgreSQL, MySQL, Oracle PL/SQL, Redis
Infrastructure and CI/CD: Docker, GitHub Actions, GitHub, GitLab, AWS, Backstage.io
Automation & Tools: Pandas, NumPy, Git, Jira, Agile/Scrum

Languages
Advanced English

Professional Experience

Software Developer (Undergraduate) - Backend Focus Recife, Brazil

VTEX Lab April 2025 – Current

- Co-designed scalable backend architecture for Backstage.io plugin automating systems maturity analysis, impacting engineering teams across the organization
- Developing robust RESTful APIs and microservices using TypeScript, NestJS, and PostgreSQL with Redis for performance optimization
- Architected data persistence layer and complex workflow management using Prisma ORM for seamless database integration

Backend Developer Intern Recife, Brazil

Softex/CIN Project 2023 – March 2025

- Reduced code quality assessment time by over 20% through automated Python analysis APIs and custom Flake8 plugin detecting 9 distinct code smells
- Architected end-to-end data processing pipelines generating comprehensive JSON reports for seamless integration and key quality metrics extraction

Backend Developer - Performance Optimization Recife, Brazil

Stellantis (FACEPE Technology Extension Project) June 2022 – August 2022

- Improved automotive data analysis efficiency by 30% with Python (Pandas, NumPy) processing backend powering interactive dashboards
- Developed command line interface (CLI) with argument parsing, enabling engineers to generate statistical analysis and visualizations using Plotly

Leadership & Technical Projects

Software Developer Recife, Brazil

***RobôCIn 2D Team**: Autonomous Robotics Team, Universidade Federal de Pernambuco* 2022 – Current

- Achieved 1st place in 2024 CBR (Brazilian Robotics Competition) and 1st place 2024 IEEE LARC (Latin American Robotics Competition) in the 2D category
- Developed and optimized algorithms and testing infrastructure to improve robot performance and reliability in autonomous soccer competitions

Data and Information Management Teaching Assistant Recife, Pernambuco, Brazil

Universidade Federal de Pernambuco Jan 2023 – July 2024

• Assisted students in understanding database concepts and guided them through Database Projects involving PL/SQL tools and schema design

• Provided individualized support to students, helping them troubleshoot complex database issues and optimize queries for better performance

Open Source & Projects

Exception Miner: Multi-language Static Analysis Tool 2024

Open-source tool identifying exception handling anti-patterns across multiple programming languages. Contributed to extending language support and analysis capabilities, enabling developers to improve code quality and robustness.

MESU: IoT Flood Monitoring System May 2022 – Aug 2022

Full-stack IoT project with Arduino sensor integration, LoRaWAN communication, and web dashboard. Built backend infrastructure processing real-time sensor data via KORA platform with HTTP APIs for data visualization.

Publications

T. Cunha et al., 'Exception Miner: A Tool for Identifying Exception Handling Practices and Anti-Patterns', Brazilian Software Engineering Society (SBES), 2024, available at SBC.

Awards

1st place in 2024 IEEE Latin American Robotics Competition (LARC) - 2D Soccer category
1st place in 2024 CBR (Brazilian Robotics Competition) - 2D Soccer category
1st place in SBMicro IoT Student Contest 2022 - MESU project