# João Prado - Resume

Rua Dr. Julio de Ribeiro Menezes, 286 - Parque Beatriz, Campinas - São Paulo

📞 (+55) 19993606538

📧 joaoprado@outlook.com.br

🌐 GitHub | LinkedIn

## Summary

Results-driven IT Engineer and Tech Lead with over 4 years of experience solving large-scale engineering challenges for critical financial systems. Specializes in building cloud-native solutions, exposing high-performance APIs, modernizing legacy architectures, and delivering data pipelines on AWS. Proven track record in reducing operational costs, increasing system resilience, and accelerating time-to-market for business-critical applications. Expert in Kotlin, Python, Angular, AWS, Glue, Terraform, CI/CD, SRE practices, Kubernetes, and observability with DataDog and OpenTelemetry.

## Work Experience

### Itaú Unibanco — São Paulo, Brazil

**IT ENGINEERING ANALYST (SENIOR) / TECH LEAD**

*Jan 2025 – Present*

- **API Modernization & External Partner Enablement:** Led the design and rollout of API exposure strategies for external partners, solving long-standing business demand for secure, scalable, and observable API consumption.
- **Graph Visualization Platform for Mainframe Modernization:** Spearheaded the development of a modular, micro-frontend web application in Angular, enabling users to visually explore relationship graphs between Mainframe components (Programs, Tables, Routines, Transactions). This solution accelerated modernization efforts by simplifying dependency mapping and impact analysis across legacy systems.
- **Cloud-Native Microservices in Kotlin:** Developed scalable backend services using Kotlin and Spring Boot WebFlux, solving performance bottlenecks and supporting high TPS scenarios with low latency.
- **Data Pipeline Modernization with AWS Glue:** Architected Glue-based ETL pipelines to solve latency and data consistency issues in batch and near-real-time data ingestion from mainframe and internal sources.

- **SRE & Observability Initiatives:** Introduced SRE practices with SLOs, SLIs, and error budgets. Reduced Mean Time to Recovery (MTTR) by 40% by implementing OpenTelemetry, DataDog APM, and CloudWatch monitoring with custom dashboards and alerts.
- **Deployment Automation & IaC:** Designed Terraform modules and GitHub Actions pipelines to solve environment drift and reduce deployment time by 70%, ensuring consistent multi-environment releases.
- **AWS Cost Optimization:** Reduced Lambda cold starts and S3 storage costs by 25%, solving budget overrun issues in cloud infrastructure.
- **Incident Response Leadership:** Acted as lead in major production incidents, conducting RCA and implementing permanent fixes for systemic issues affecting uptime and availability.
- **Kubernetes Exposure:** Contributed to container orchestration initiatives using AWS ECS with initial exposure to Kubernetes (EKS), participating in discussions on workload migration and container scaling strategies.
- **Agile & Stakeholder Management:** Worked closely with Product Owners, Business Analysts, and cross-functional teams in Agile/Scrum environments to prioritize backlog, refine requirements, and align technical deliveries with business goals.
- **Mentoring & Technical Leadership:** Coached engineers in Kotlin, Python, Angular, AWS architecture, distributed systems, observability, and SRE mindset. Led design reviews and architecture boards.

## IT ENGINEERING ANALYST (MID-LEVEL)
*Jul 2022 – Dec 2024*

- **Mainframe Data Offloading:** Designed Python tools to automate extraction and offloading of mainframe data to AWS S3 via PrivateLink, eliminating manual intervention and reducing processing time.
- **Infrastructure as Code (IaC):** Provisioned scalable AWS infrastructure (EC2, Lambda, S3, RDS, Neptune) using Terraform and CI/CD pipelines, solving infrastructure provisioning bottlenecks.
- **Real-Time Data Processing:** Built Python services for ingesting and transforming streaming and batch data into PostgreSQL and Amazon Neptune, solving data freshness issues for analytics teams.
- **Micro Frontends for Graph Navigation:** Developed Angular-based micro frontends with modular architecture, enabling end-users to interactively navigate relationship graphs of mainframe components, improving the discovery of cross-system dependencies and accelerating modernization roadmaps.
- **Cloud-to-Mainframe Integration:** Modeled transactional data and built visualization layers using Neptune and D3.js, enabling technical teams to analyze transaction flow and reduce debugging time.

- **API Management:** Developed and deployed AWS API Gateway with custom domains and SSL/TLS certificates across dev, staging, and production, solving API governance and partner access control challenges.
- **Performance Testing:** Built Python and Node.js load-testing tools for mainframe transaction simulation, helping infrastructure teams identify and fix capacity issues.
- **CI/CD & Observability for Data Pipelines:** Improved reliability of data flows with automated deployments, custom monitoring scripts, and alerting on failed ETL jobs.

## IT ENGINEERING ANALYST (JUNIOR)
*Oct 2021 – Jul 2022*

- **Automation of Mainframe Operations:** Automated Db2 loads and VSAM cleanups using Python and zOSMF, improving batch job efficiency and reliability.
- **HTTP Mainframe Simulators:** Built COBOL-based HTTP request simulators to validate end-to-end integrations between mainframe and AWS APIs.
- **Monitoring Dashboards for Legacy Systems:** Created REXX and Panels-based dashboards for faster error detection and log analysis, reducing manual monitoring efforts.
- **Internal Developer Platform:** Delivered an Openshift-based web platform for developers to run Python scripts securely with Azure Authentication and versioning.

## Pirelli — Campinas, São Paulo, Brazil

### PROJECT AND AUTOMATION ENGINEER
*Feb 2021 – Oct 2021*

- **Factory Automation:** Reduced production downtime by programming PLCs (Siemens, Allen-Bradley) and designing safe electrical panels using AutoCAD Electrical.
- **Process Optimization:** Improved production efficiency by automating critical industrial processes.
- **Project Coordination:** Managed automation projects from design to commissioning, solving coordination gaps between engineering and operations teams.

### ELECTRICAL ENGINEERING INTERN
*Jan 2019 – Dec 2020*

- **Automation Support:** Supported PLC programming and system testing, contributing to reducing failure rates on production lines.
- **Electrical Design:** Assisted in drawing electrical diagrams and performing component sizing for automation projects.

# Certifications

- **2024** - Building Cloud Computing Solutions at Scale Specialization, Duke University *(Remote)*
- **2024** - Cloud Machine Learning Engineering and MLOps, Duke University *(Remote)*
- **2024** - Cloud Data Engineering, Duke University *(Remote)*
- **2024** - Cloud Virtualization, Containers, and APIs, Duke University *(Remote)*
- **2024** - Spark, Hadoop, and Snowflake for Data Engineering, Duke University *(Remote)*
- **2024** - Object-Oriented Programming in Python, Duke University *(Remote)*
- **2024** - Generative AI with Large Language Models, Coursera *(Remote)*
- **2023** - AWS Certified Cloud Practitioner, Amazon Web Services *(Remote)*
- **2022** - Mainframe Specialist Certifications, Interskill Learning *(Remote)*

# Technical Skills

## Programming Languages

`Kotlin` `Python` `Java` `JavaScript` `TypeScript` `Node.js` `Angular` `REXX`

## Cloud Platforms & Services

`AWS Lambda` `AWS Glue` `Amazon S3` `Amazon RDS` `Amazon Neptune` `AWS Athena` `EC2` `ECS` `EKS` `API Gateway` `VPC` `PrivateLink` `Openshift`

## DevOps & Automation

`CI/CD Pipelines` `Docker` `Kubernetes` `GitHub Actions` `Terraform` `Infrastructure as Code (IaC)`

## Data & Databases

`PostgreSQL` `Amazon RDS` `Amazon Neptune` `MongoDB` `DB2 on z/OS` `Data Modeling` `ETL Pipelines`

## Web & Frontend Development

`Kotlin Spring Boot` `Module Federation` `RESTful APIs` `Express.js` `React.js` `Django` `Flask` `Microservices Architecture`

## Graph Visualization & UI

`D3.js` `Modular Web Architectures` `Data-driven Visualization` `Interactive Graph Navigation`

## Scripting & Automation

`Shell Scripting` `JCL` `zOSMF` `Python Automation` `REXX` `Terraform Scripting`

## Big Data & Analytics

`AWS Glue` `Apache Spark` `Hadoop` `Snowflake` `Pandas` `psycopg2` `gremlinpython`
`Data Processing & Transformation`

## Performance, Monitoring & Observability

`DataDog` `CloudWatch` `OpenTelemetry` `JMeter` `Load Testing` `Performance`
`Tuning` `Real-Time Monitoring`

## Security & Compliance

`IAM` `Azure Authentication` `SSL/TLS` `Secure Data Transfer` `Network Security`
`PrivateLink`

## Other Technologies

`Azure DevOps` `VMware` `SAP ERP` `AWS CDK` `Open Policy Agent (OPA)` `Linux`

## Soft Skills

`Leadership` `Ownership` `Stakeholder Management` `Problem Solving` `Team`
`Collaboration` `Communication` `Agile Development` `Mentorship`

## Languages

`Portuguese (Native)` `English (Medium Proficiency)`

# Agile & Collaboration

- Strong experience working in Agile (Scrum/Kanban) environments, participating in sprint ceremonies like backlog grooming, planning, retrospectives, and daily stand-ups.
- Regularly collaborates with Product Owners, Business Analysts, Architects, and QA teams to align technical solutions with business goals.
- Comfortable leading cross-functional discussions and presenting technical designs to both technical and non-technical stakeholders.

# Education

**State University of Campinas — Campinas, São Paulo, Brazil**

*Bachelor of Engineering in Electrical and Electronic Engineering*

*2016 – 2020*

- **Core Studies:** Mathematics, Physics, Chemistry, Mechanics, Computer Science, Electricity, Material Resistance, Transport Phenomena.
- **General Studies:** Administration, Humanities, Social Sciences, Law, Ethics, Economics, Environmental Sciences.
- **Professional Formation:** Electric Circuits, Electrical Measurements, Electromagnetism, Electronics, Electrical Materials, Energy Conversion, Control Systems.
- **Specializations:** Telecommunications, Electric Power, Microelectronics, Optoelectronics, Computer Engineering, Automation and Control, Biomedical Engineering.

# Key Highlights

## BUSINESS IMPACT & PROBLEM SOLVER

- Solves complex engineering problems with high business impact, from reducing AWS costs to improving API SLAs and modernizing legacy systems.

## TECH LEADERSHIP

- Leads squads through architecture decisions, technical reviews, mentorship, and stakeholder management.

## CLOUD ARCHITECTURE & COST OPTIMIZATION

- Designs AWS-based architectures focused on scalability, resilience, and cost-efficiency.

## SRE & OBSERVABILITY

- Champions SRE culture through SLA enforcement, MTTR reduction, error budget tracking, and DataDog-driven observability.

## API-FIRST & DATA-DRIVEN ENGINEERING

- Specializes in exposing scalable APIs and building event-driven, data-intensive cloud pipelines.