

Pedro Serio

Cloud & DevOps Engineer | AWS Certified Solutions Architect | Python & IaC

Portfolio: pedro-serio.netlify.app

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PROFESSIONAL SUMMARY

Cloud and DevOps engineer with 3+ years of experience architecting, automating, and scaling production-grade AWS infrastructure. Built an event-driven automation that replaced a manual process with up to 5-day turnaround with a trigger-based system completing in seconds, one of several automations that have freed hours to days of team capacity for higher-value work. Works in Python (boto3) with serverless components (Lambda, Step Functions, EventBridge, SNS/SQS), Infrastructure as Code (CDK, CloudFormation), and CI/CD (GitHub Actions, CodePipeline, CodeArtifact) to turn data-intensive workflows into reliable, distributed systems. AWS Certified Solutions Architect – Associate with hands-on production experience across compute, storage, messaging, containers, and IAM.

TECHNICAL SKILLS

- **Core:** Cloud Architecture (AWS), DevOps, Infrastructure as Code, Platform Automation, Event-Driven Architecture, Microservices, Systems Integration
- **AWS:** Lambda, Step Functions, EventBridge, ECS, S3, EC2, Batch, DynamoDB, SNS, SQS, IAM, DataSync, CloudWatch, AWS CLI, CDK, CloudFormation
- **Backend & Scripting:** Python (boto3), Bash, R, Linux/Unix shell operations
- **Containers & CI/CD:** Docker, Docker Compose, GitHub Actions, AWS CodePipeline, AWS CodeArtifact
- **Data & Tooling:** NoSQL (DynamoDB), Git, VS Code
- **Languages:** English (fluent), Portuguese (native), Spanish (basic)
- **AI Stack:** Amazon Bedrock, Langchain, OpenAI, Claude, OpenCode

CERTIFICATIONS

- AWS Certified Solutions Architect – Associate (SAA-C03), Amazon Web Services, 2025

PROFESSIONAL EXPERIENCE

Genesis Genomics — São Paulo, Brazil *(largest genomics center in Latin America)*

Cloud Infrastructure & Automation Engineer, R&D Team 2025 – Present

- Architected an event-driven automation (Lambda, Step Functions, EventBridge) that replaced a manual process with up to 5-day turnaround with a trigger-based system completing in seconds, freeing 1-5 hours/day of team capacity for higher-value work.
- Engineer and maintain analytical microservices and Python-based internal toolkits, using serverless triggers (Lambda, SNS, SQS) and containerized components (Docker) to run background execution flows reliably.
- Apply clean code principles and defensive design to production data pipelines built with Nextflow and CI/CD automation (GitHub Actions, CodePipeline), improving execution runtime and pipeline reliability.

Cloud Systems & Operations Analyst, Operational Team 2024 – 2025

- Provided SLA-driven tier support, performance tuning, and incident troubleshooting for high-throughput data servers and AWS infrastructure, reducing recurring incident resolution time.
- Managed daily AWS operations (S3, IAM, DataSync, Lambda, CloudFormation, AWS CLI), maintaining data security compliance and identity/access management across production environments.
- Led cross-functional integration of internal LIMS with platform APIs in Python (boto3), automating end-to-end service-order data synchronization and removing a manual handoff step between teams.

Grupo Fleury – Genomics Center — São Paulo, Brazil

Systems & Data Analyst 2023 – 2024

- Managed and optimized technical data workflows in Python, running quality control across large-scale sample inputs and computational data-processing pipelines, reducing artifact-related reprocessing.
- Partnered with lab operations to align system outputs with data governance and reporting requirements, closing a recurring gap between pipeline outputs and downstream reporting needs.

Oncology Translational Research Center (CTO/ICESP) — São Paulo, Brazil

PhD Scientist & Data Developer 2018 – 2023

- Built custom Python/R scripts and data pipelines to process large-scale genomic databases and managed a multi-year, version-controlled research project (Git), applying reproducible-analysis practices to complex, high-volume datasets.

EDUCATION

- **MBA, Data Science and Analytics — ESALQ/USP, 2023–2025.** Thesis (grade 10/10): designed and orchestrated a 10-source ETL pipeline (~20GB raw data) and trained an Elastic Net model (96.3% AUC); published as an open-source R package on GitHub.
- **PhD, Genomics and Transcriptomics — FMUSP/ICESP, 2018–2023** (focus: data-driven mutational profiling and computational analysis)
- **Specialization, Molecular Biology — FMUSP/ICESP, 2017–2018** | Bachelor's Degree, Biomedical Science — UNIP, 2012–2016