

CÉSAR AUGUSTO DOS SANTOS MAFRA

Backend Software Engineer · Python · Django · PostgreSQL · Cloud / DevOps

Rio Branco, Brazil · Open to remote & relocation · hello@cesarsantos.dev

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PROFESSIONAL SUMMARY

Software Engineer with 5 years of hands-on experience in backend development, system integration, and modernization of critical platforms. Most recent role at the Court of Justice of Acre (via SONDA) architecting AI-powered modules with WhisperX/CUDA, Python backends (Django/Flask) and integrations between judicial data sources (SAJ, eProc).

Strong skills in REST API design, PostgreSQL data modeling with optimized views, containerized environments with Docker, and CI/CD pipelines on GitLab. Oracle Cloud Infrastructure 2025 Foundations Associate and OCI 2025 AI Foundations Associate certified. Actively studying Kubernetes (PICK LINUXtips) and pursuing a Postgraduate degree in Cybersecurity – Red Team at FIAP.

Available for remote opportunities as a Mid-Level Backend Engineer at Brazilian or international companies.

PROFESSIONAL EXPERIENCE

Software Engineer (Mid-Level) · SONDA Brasil — Court of Justice of Acre (TJAC) Oct 2025 — May 2026

Python · Django · Flask · PostgreSQL · Docker · GitLab CI/CD · WhisperX · CUDA · Keycloak

- Implemented an AI-powered legal transcription and speaker diarization pipeline using WhisperX, Wav2Vec2 and Pyannote running on NVIDIA A2000 GPU, deployed fully offline inside the Court's segregated network — project ADA/TranscriptJAC.
- Architected the backend for Project LÚCIA (AI-assisted public procurement) in Python/Flask: PostgreSQL data modeling for DOD/ETP/TR documents, full Services and Controllers layer with CRUD and dynamic filtering, document versioning, switchable LLM backends (Gemini and GPT), Keycloak + JWT authentication, Swagger/OpenAPI documentation, and pytest unit testing.
- Modernized core modules of the Vera System (judicial case management): audit dashboard with request log visualization and CSV export, phonetic name search, advanced filtering with Flatpickr + DataTables, refactoring for legacy categories deprecation, optimized PostgreSQL views for SAJ/eProc integration.
- Configured and stabilized the Linux/WSL2 + NVIDIA Drivers + CUDA + cuDNN + Conda + PyTorch environment for fully offline ASR model execution, overcoming the Court's network restrictions by pre-downloading and bundling dependencies.
- Contributed to CI/CD pipelines on GitLab, Nginx and PM2 configurations, and backend deployments to the Court's production environment.
- Served as interim technical coordinator for 20 days in December 2025, replacing the regular manager during her leave. Coordinated a mixed dev + N1/N2 support team, monitoring SLAs, distributing tasks, and reporting operational KPIs.

Software Developer · State of Acre Government — Iteracre (Land Institute) Mar 2024 — Oct 2024

PHP · CakePHP · PostgreSQL · Docker · GitLab

- Designed and built the State Land Registration System, automating land demarcation and title issuance for urban and rural areas.
- Implemented containerized environments with Docker, ensuring development/production parity.
- Established versioning and CI workflows on GitLab for the development team.

Data Analyst · Web Developer · XLand Holding (Remote) Sep 2022 — Dec 2022

Python · PHP · Laravel · SQL

- Developed web modules in Laravel and provided specialized IT infrastructure support.
- Managed complex SQL databases with focus on data integrity and BI reporting.

Software Developer & IT Division Chief · State of Acre Government — SEASDHM Feb 2019 — Aug 2022

Python · PostgreSQL · Moodle · HTML/CSS/JS · IT Governance

- Built a Python-based Distance Learning platform integrated with Moodle, including custom plugins and integrations with internal systems. The platform ran in production and was used by dozens of government employees to deliver classes and training sessions.
- Digitized internal administrative workflows using Python + PostgreSQL, reducing manual rework in service requests and reporting.

- Designed and operated the Secretariat's virtual online support environment.
- Led the IT team at the Secretariat of Human Rights and Women's Policies: technical support, governance, infrastructure, and demand management.

TECHNICAL STACK

- **Backend & Languages:** Python (Django, Flask), Java, advanced SQL, JavaScript/TypeScript
- **Data:** PostgreSQL (views, optimized queries, BI), Pandas, NumPy, ETL pipelines
- **Applied AI / ML:** WhisperX, Faster-Whisper, Pyannote, CUDA, integration with Gemini/GPT APIs
- **Cloud & DevOps:** Docker, GitLab CI/CD, Nginx, PM2, Linux/WSL2, AWS (EC2, S3), Oracle Cloud Infrastructure
- **Security:** Keycloak, JWT, OWASP principles, Red Team fundamentals (FIAP)
- **Other:** Git, Swagger/OpenAPI, pytest, REST APIs, system integration

PERSONAL PROJECTS

- **DevOps Roadmap Tracker** — Web application to track a personal DevOps learning roadmap with push notifications and interactive checklists. dev-ops-roadmap-tracker.vercel.app
- **NFLStatsLab** — Data Science project analyzing 20 years of NFL data (2003–2023): ETL, EDA, Pandas, NumPy, Seaborn.

EDUCATION

- **Postgraduate in Cybersecurity — Red Team** · FIAP · In progress (started Aug 2025)
- **B.S. in Information Systems** · Estácio Unimeta · Completed Jul 2025

CERTIFICATIONS

- **Oracle Cloud Infrastructure 2025 Certified Foundations Associate** · Oracle · Sep 18, 2025 — Credential ID: 102661001OCI25FNDCFA
- **Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate** · Oracle · Sep 24, 2025 — Credential ID: 102661001OCI25AICFA

Both obtained through the Oracle Next Education program (Jan — Aug 2025). Valid until Sep 2027.

CONTINUING EDUCATION

- **Linux for Cloud Native** · LINUXtips · In progress (2026) — Linux systems automation, SRE fundamentals, cloud environments
- **PICK — Intensive Program in Containers & Kubernetes** · LINUXtips · In progress (2026) — Advanced Docker, Kubernetes, image security, container ecosystem
- **GitHub Actions & CI/CD Pipelines** · LINUXtips · In progress (2026) — Build/test pipeline automation, GitOps, security scanning (Trivy, Hadolint)
- **Full Stack Python Developer** · EBAC · Completed 2023/2024
- **Data Analysis with Python** · EBAC · Completed 2025
- **SQL for Data Analysis** · EBAC · Completed 2023

LANGUAGES

- **Portuguese** — Native
- **Spanish** — Advanced
- **English** — Intermediate (fluent technical reading, conversational improving)
- **German** — A1 (Stephanie Lich Institute)