Juan Almaraz

Backend Developer | Python · FastAPI · PostgreSQL · AWS

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SUMMARY

Backend developer with 2+ years of Python experience, building product backends with FastAPI and PostgreSQL: REST APIs, microservices, automated testing and cloud deployment (AWS). Engineering background in statistics, signal processing and ML.

SKILLS

Languages	Python, TypeScript, SQL
Backend	FastAPI, Pydantic, SQLAlchemy, Alembic, REST APIs, JWT authentication, async, OpenAPI, pytest
Databases	PostgreSQL, MySQL
Cloud and DevOps	AWS (EC2, RDS, S3, SES, ECR, Secrets Manager), Docker, CI/CD (GitHub Actions), Git
Methodologies	Agile, SDD, TDD
AI and ML	Claude Code, LLM APIs, PyTorch, Ultralytics YOLO, scikit-learn, pandas

EXPERIENCE

Mecantronic — Buenos Aires, Argentina
Mid-Level Backend Developer — Mar 2025 – Present
Backend and full-stack development for client projects across industries (fintech, agribusiness, energy).
Technologies: Python, FastAPI, PostgreSQL, MySQL, Docker, AWS.

- Owned features end to end, from gathering requirements with clients to deploying them in monthly production releases.
- Integrated third-party APIs (payment providers, email, messaging) and automated manual processes such as payment reconciliation and billing.
- Built AI-powered solutions, including a computer vision MVP for oil spill detection and conversational bots on WhatsApp and Telegram.
- Adopted spec-driven development with AI coding agents (Claude Code) as part of the daily workflow.

Infiniem Labs — Buenos Aires, Argentina
Machine Learning Engineer (Internship) — Aug 2024 – Dec 2024
Contributed to a synthetic speech detection system: built audio datasets, cleaned recordings, ran exploratory and statistical analysis, and trained models in Python.

Universidad de la Defensa Nacional (UNDEF) — Buenos Aires, Argentina
Teaching Assistant – Mechatronics Lab (Part-time) — Oct 2026 – Present
Guide students through their mechatronics projects, helping them design, build and troubleshoot their prototypes.

Universidad Nacional de Tres de Febrero — Buenos Aires, Argentina
Teaching Assistant – Electromagnetism — Feb 2022 – Dec 2022

RESEARCH AND PROJECTS

- **Publication:** *Threshold for pulse density of velvet noise used in artificial reverberation*, presented at JAAS 2025. Designed an ABX listening test with 28 participants and ran the statistical analysis in Python.
- **Impulse Analyzer** (Python, PyQt5, SciPy) – desktop app that computes room acoustic parameters (EDT, T20, T30, C50, C80, IACC) from impulse responses. github.com/almarazj/impulse-analyzer

EDUCATION

Universidad Nacional de Tres de Febrero — Buenos Aires, Argentina
B.Eng. in Sound Engineering – all coursework completed, thesis in progress — Coursework completed: Dec 2024
Thesis: evaluation of deep learning audio watermarking systems (AudioSeal, SilentCipher, WavMark) for synthetic speech detection.

LANGUAGES AND CERTIFICATIONS

English C2 Proficient (EF SET 76/100, 2026) · Spanish (native)
DataCamp ML Fundamentals with Python (2024) · IBM Python for Data Science and Data Analysis (2022)