

Sebastián "Cux" Prada

AI/ML ENGINEER

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Computer Science and Engineering student focused on AI software, backend systems, and competitive programming. I build voice and LLM features along with the production infrastructure that supports them, backed by a strong algorithmic foundation and a habit of turning ideas into working software.

EDUCATION

Universitat Politècnica de València (UPV) — BSc Computer Science & Engineering Sep 2023 – 2027 (expected)
High Academic Achievement track (ARA), taught in English Valencia, Spain

- Matrícula de Honor in Programming, Notable in Software Engineering, and Sobresaliente in Introduction to Programming.

IES Adeje — Science & Technology Baccalaureate (Canary Islands, Spain) 2020 – 2022

- 8.5/10 average (about 3.4/4.0 GPA) on a demanding science track.

SELECTED PROJECTS

Sofia — Real-time voice AI agent 2026

Python · LiveKit · Deepgram Nova-3 · Claude Haiku 4.5 / Gemini 2.5 Flash · ElevenLabs · PostgreSQL

- Built a 24/7 phone agent as a real-time speech-to-LLM-to-speech cascade with a median latency of about 1.46 s per turn, measured per stage (STT, LLM, TTS).
- Engineered idempotent tool-calling, where a Postgres unique index guarantees exactly one row per call, with runtime failover between Claude Haiku 4.5 and Gemini 2.5 Flash.
- Typed with `mypy --strict`, over 90% test coverage on the business logic, Dockerized and CI-gated.

UltimaDL — Zero-disk-IO media pipeline 2025

Rust · yt-dlp · FFmpeg

- Streamed yt-dlp into FFmpeg over in-memory pipes to convert a 6-hour stream to MP3 at about 52x real-time, with a constant RAM footprint and no intermediate disk IO.

MIX_SORTER — Harmonic playlist engine 2025

Rust · Spotify Web API

- Reorders Spotify playlists by Camelot key and BPM for DJ-friendly harmonic mixing, reconciling local metadata against the Spotify API.

EXPERIENCE

Organitech — Full-stack Engineer 2025

Node.js · Express · EJS · HTMX · SQLite

- Built a unified production and maintenance system for a major textile manufacturer and importer in Colombia, with a tablet-first UI, a live machine map, and auto-generated downtime work orders across four operator roles.

Hyperloop UPV — Firmware & Software Engineer 2023 – 2024

- Built web and embedded software in a competitive engineering team, including REST APIs and C++ state machines.

LEADERSHIP & ACTIVITIES

Competitive Programming UPV — Vice-President 2023 – 2026

- Revived a near-dead group and rebuilt it into the largest competitive-programming team in Spain, around 200 active members. Placed 4th in the Valencia regional contest and 11th nationally in 2025.

ACM UPV — Vice-President · GDG on Campus UPV — Core Team 2023 – 2026

- Organized hackathons, technical workshops (including SQL-injection and cybersecurity), and company events. Co-founded Launchpad, a student startup incubator run on weekly Scrum and continuous iteration.

SKILLS & INTERESTS

Programming: Python, Rust, C++, Java, TypeScript/JavaScript, SQL

AI/ML: LLMs and real-time voice pipelines (LiveKit, Deepgram, ElevenLabs) · pandas, scikit-learn, XGBoost, feature engineering, model validation, SHAP explainability, time-series forecasting · 12 Kaggle Learn certificates

Data & Systems: Google BigQuery, SQL (joins, CTEs, window functions), Spring Boot, microservices, Docker, Linux/Arch, Git

Languages: Spanish (native), English (fluent), Portuguese (fluent)

Interests: Muay Thai vice-champion of Spain and BJJ vice-champion, MMA instructor · Colemak-DH typing · invited to the UN and HP HQ Barcelona