

Jonathan Sansó - Ssr. Fullstack Developer (Node.js / React) + AI Engineering (Python OCR/NLP) - Higher Degree in Programming

React | Next.js | TypeScript | Tailwind | Bootstrap | NestJS | Python (FastAPI, OCR, NLP) | Prisma | MySQL | PostgreSQL | MongoDB | Docker | NGINX | Debian | Git | GitHub

Buenos Aires, Argentina - Remote - Tel.: +5491169123268 - E-mail: jonasans2@live.com.ar - English: B2 - Links: <https://portfolio-sanso-jonathan.netlify.app> - <https://github.com/jonathansansok> - <https://linkedin.com/in/jonathan-sanso-fullstack>

Professional Experience

1. Argentine Federal Penitentiary Service (Jan 2024 - Present) [Private links]

a) Institutional Platform for Complex Events - Frontend & Backend + AI Engineering

- **Lead developer** of a **national-scale** internal platform across multiple penitentiary units.
- **Designed and implemented an AI microservice (Python + FastAPI)** for OCR and NLP, enabling **automatic text extraction** from **images/PDFs** and **smart field auto-completion** inside institutional forms.
- Built **OCR pipelines** using **Tesseract** with **custom preprocessing**, **language models**, **noise reduction** and **text reconstruction** (de-hyphenation, whitespace normalization).
- **Developed OCR pipelines** in **Python (FastAPI + Tesseract)** to **extract full text** from institutional documents, and built an **NLP summarization** module that **produces humanized, condensed summaries** with **configurable length**. Added **security classification (LOW/MID/HIGH)** and **basic inconsistency detection**.
- **Integrated frontend AI actions** in **Next.js**: “**Analyze with AI**”, **auto-populated fields**, and **human-review workflows**.
- **Replaced manual Excel workflows** by building **Python (Pandas) ETL pipelines** to **normalize raw files**, **clean headers**, **unify establishment codes**, **convert dates** to **ISO-8601** and **generate automated NestJS/Prisma import scripts** for **MySQL**.
- **Dynamic forms** with **complex validations**, **modals**, **file uploads**, and **image croppers**.
- **Interactive maps (Leaflet/Google Maps)** for **events** and **geospatial zones**.
- **Automated PDF/Excel/Word reports** with **statistical charts** and **temporal-spatial filters**.
- **WhatsApp integration** for **alerts** and **coordination**.
- **Secure architecture**: **Next.js**, **Tailwind**, **NestJS**, **Prisma**, **MySQL**, **Docker**, **NGINX** on **Debian**; **Auth0 2FA**, **CSRF**, **sanitization**, **rate limiting**.
- **Fully dockerized** with **automated backups** on a **self-managed Linux environment**.

b) Public Web Verification Portal - Frontend & Backend

- **Public extension** of the **Institutional Platform for Complex Events**, providing **secure document verification** for **national and international organizations**.
- Verifies reports via **CV + CRC validation (HMAC-SHA256)** and issues **10-minute JWT view grants (HS256)** with **server-controlled, time-limited access**.
- **Anti-exfiltration controls**: **disables copy/paste**, **print**, and **captures**; **adds recipient watermark overlay**.
- Renders **TipTap JSON → HTML** with **justified text** and institutional formatting.
- Signed push **API** with **HMAC**, **idempotency keys**, **clock-skew validation**, and **SHA-256** file integrity checks.
- Stack: **React (Vite)**, **TypeScript**, **Tailwind**, **NestJS**, **Prisma**, **MariaDB**, **Docker/Compose**, **NGINX**, **Helmet/CORS**.

c) Ticketing System - Frontend & Backend

- Internal **IT ticketing** platform in **PHP + MySQL** with **Google SSO**.
- Incident intake, assignment, status tracking, and audit trail.
- Streamlined maintenance **workflows** with **reliable, searchable history**.

2. VirtuaState - Frontend (May 2022 - Jul 2022)

- Built a responsive portfolio site for a **VR/AR studio (HTML5/CSS/JS, mobile-first)**, implementing **SEO** and **performance optimizations** to improve **visibility** and **load speed**. Live: www.virtuastate.net

Education:

1. Higher Degree in Programming - Teclab (Aug 2022 - Aug 2024)

Subjects: **Programming Logic**, **SQL Databases**, **Web Development (JavaScript, PHP)**, **UX**, **Cloud Operations (AWS Practitioner)**, **Project Management**, **Mobile Development (Java)**, **Configuration Management**, **Web Integrations**, **Information Systems Design**, **Interface Development**, **Time & Work Organization**, **People Management**, and **Decision-Making & Problem Solving**.

2. Frontend - Backend - CoderHouse (Jan 2022 - Mar 2023)

Delivered all projects on time using **HTML5**, **EJS**, **CSS**, **SASS**, **React**, **Node.js**, **MongoDB**, **Express**, and **GraphQL**, as seen at <https://react-e-commerce-j-sanso.vercel.app>