# Diego Arturo Alveal Vásquez

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## Profile

Junior full-stack developer and Computer Science Engineer focused on AI integration (LLMs, agents, and RAG). Experienced in building web applications end to end with modern technologies, following Clean Architecture and good coding practices.

## Experience

**Universidad Católica de Temuco, CINAP** — Temuco, Chile
*Undergraduate Thesis — AI-Assisted Scheduling Platform* — Jul 2025 – Jan 2026

- Built, in a two-person team, a scheduling platform for academic advising sessions with Next.js, FastAPI, and PostgreSQL following Clean Architecture, deployed with Docker.
- Implemented a LangGraph and LangChain conversational agent that books, reschedules, and cancels sessions through two MCP servers (FastMCP): one for Google Calendar and one for PostgreSQL.
- Migrated inference from Ollama to vLLM to serve Qwen3-4B on GPU, and added semantic search (RAG) with pgvector over institutional documents.
- Enabled scheduling through Telegram voice notes with Whisper transcription.
- Validated sub-2 s responses for 10 concurrent users on web, Telegram, and voice, with Redis caching.
- Used separate Git branches for development and testing before each production deployment.

**Hospital San José de Victoria, IT Unit** — Victoria, Chile
*Software Developer Intern* — Dec 2023 – Jan 2024

- Built a fingerprint identification web system (DigitalPersona U.are.U 4500) for supply staff to confirm purchase orders, replacing password-based identification.
- Implemented staff and fingerprint enrollment, missing-data checks, and tracking of who confirmed each order, using PHP, JavaScript, and a Docker service.
- Built a web app to register warehouse items by scanning barcodes from an industrial Android device, inserting and updating records in MySQL via AJAX.

## Projects

**Receipt Scanner** | *Next.js, TypeScript, Tesseract.js, Convex* — Nov 2026
project-ocr-receipts.vercel.app • github.com/DGVipe/project-ocr-receipts

- Built a web app that extracts the store, date, and total from receipt photos using in-browser OCR, without uploading the image to a server.
- Validated extracted data server-side and enforced per-user and per-IP rate limits through HMAC-hashed anonymous cookies, with no sign-up required.
- Added paginated lists, Excel export, and an English/Spanish interface; deployed on Vercel.

## Education

**Universidad Católica de Temuco** — Temuco, Chile
*Computer Science Engineering (Ingeniería Civil en Informática)* — Graduated Oct 2026
Specialization in Advanced Topics in Software Development • GPA: 6.15 / 7.0

## Skills

**Programming:** Python, TypeScript, JavaScript, SQL, Java, C, PHP
**Frontend:** Next.js, React, Tailwind CSS, shadcn/ui
**Backend & Data:** FastAPI, Flask, Laravel, Flask, Node.js, PostgreSQL, MySQL, SQL Server, Redis, Convex
**AI & ML:** LangGraph, LangChain, MCP (FastMCP), vLLM, Ollama, Whisper, RAG, Tesseract.js
**Mobile & Tools:** Flutter, React Native, Docker, Git, Vercel
**Languages:** Spanish (native); English (C1, advanced)