

Riccardo Mattia Sapuppo

Full-stack Developer · Catania, Italy

Open to fully remote roles

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Full-stack developer building web, mobile and desktop products with Angular, React, Node.js and relational databases, and integrating language models into them: conversational agents, retrieval over company documents, structured extraction. Independently built and runs Walk Around, a consumer audio-guide product. Most recently built Page Builder CMS, an open-source page builder on Rails and React. Software developer since 2017, with experience in healthcare, medical imaging and operational platforms.

SKILLS

Frontend: Angular, React, TypeScript, JavaScript, RxJS

Mobile & desktop: Ionic, Electron

Backend & APIs: Node.js, Express, Ruby on Rails, Ruby, Active Record, .NET Core, C#, Python, FastAPI, PHP, REST APIs

AI & LLM engineering: AI agents, Multi-agent orchestration, Retrieval-augmented generation (RAG), Embeddings, Vector & hybrid search, Function calling, Structured model output, Prompt engineering

AI models & tooling: OpenAI API, Anthropic API, Mistral AI, Ollama, LangChain, LangGraph, LlamaIndex, pgvector

Data: PostgreSQL, SQL Server, MySQL, SQLite, SQL query optimisation

Cloud & delivery: Docker, IIS / Windows Server, CI/CD, GitHub Actions

Testing & automation: Vitest, Playwright, Minitest, Puppeteer, Robot Framework, RuboCop, Brakeman

Architecture & integrations: Multi-tenant architecture, Scheduled processes, Third-party API integrations, OpenAPI, JSON Schema

EXPERIENCE

Nolex — Full-stack Developer

May 2022 – present · Catania, Italy

Healthcare software company: PACS, radiology workflow, patient booking and patient portals, with its solutions in 500+ healthcare facilities across Italy.

- Owned the company's multi-tenant patient booking product from analysis to release: 24 centres, 9,800+ registered users, 12,400+ bookings.
- Proposed and carried out moving the centre-to-cloud synchronisation out of SQL Server stored procedures into Node.js, ending the redundant exam-row copies the procedures kept writing (80+ million, down to about 85,000): disk writes fell from ~575/s to 1–3/s, write latency from 150–600 ms to under 9 ms.
- Shipped language-model features into products in service: a LangGraph agent in Python and FastAPI that books, reschedules and cancels examinations over phone and messaging and hands over to a person outside its domain, a retrieval-augmented chat over company documents, and schema-constrained extraction that sorts order email into nine intents.
- Built DICOM viewers in React and Electron, for the browser and the desktop, with 2D/3D reconstruction, measurements, multi-monitor reading rooms and PACS access over DICOMweb, plus the reporting and central monitoring of installations across multiple healthcare sites.
- Built Node.js and Express REST services on PostgreSQL and SQL Server: an internal OCR service with OAuth2 client credentials, per-client rate limits and synchronous, streaming or asynchronous modes; scheduled jobs for database maintenance and notifications; Windows installers that configure IIS.

React · Angular · Ionic · Electron · Node.js · Express · Python · FastAPI · OpenAI API · Mistral AI · LangGraph · RAG · AI agents · PostgreSQL · SQL Server

bp&a — Software Developer

Oct 2020 – Apr 2022 · Acireale, Italy

- Built the Angular dashboard for a bank's mortgage payoffs and the back end for decommissioning electronic toll devices.
- Built a barcode-driven mail flow: scanning a letter sent its recipient's details to the back end, and Puppeteer entered them into the postal service's official web form, with no manual retyping.

Angular · Ionic · .NET Core · C# · Node.js · Puppeteer · PostgreSQL · CI/CD

Urban Media Agency — Frontend & Mobile Developer

Sep 2017 – Dec 2020 · Catania, Italy

- Built Angular web apps, UI component libraries and Ionic mobile apps for the agency's clients, from first screen to store build.
- Worked with designers and marketing teams on several client projects in parallel, turning mock-ups into responsive, cross-browser interfaces against fixed go-live dates.

Angular · Ionic · TypeScript · REST API · HTML5 · CSS3

Bonsei — Frontend Developer

Jan 2017 – Mar 2018 · Motta Sant'Anastasia, Catania, Italy

- Built and customised WordPress sites and themes with HTML5, CSS3, JavaScript and PHP templates.
- Turned graphic layouts into responsive pages and kept content editable by non-technical staff.

HTML5 · CSS3 · JavaScript · WordPress · PHP · MySQL

SELECTED PROJECTS

Page Builder CMS Personal project, open source with a browser demo: a page builder and CMS where a React and TypeScript editor builds pages from sections, columns and 18 widget types, and Rails 8 validates each page against one JSON Schema, keeps a draft and its versions, publishes on schedule through Solid Queue and serves pages from Solid Cache with HTTP caching; React and server rendering held equal by parity tests, 374 API answers held to the OpenAPI description, CI on Linux and Windows. Ruby on Rails · React · TypeScript · Ruby · SQLite · Solid Queue · Solid Cache · Active Storage · Vite · Zustand · Tiptap · dnd-kit · JSON Schema · OpenAPI · Playwright · axe-core · Vitest · Minitest

Walk Around Audio Guides Personal product, designed, built and run single-handedly and live at walkaround.cloud: GPS audio guides for Sicilian cities with a server-enforced free preview, PayPal checkout, offline listening, partner QR codes and six languages (~3,000 UI strings, 739 narration tracks) translated and voiced through the OpenAI API; 26 PostgreSQL tables, Docker, CI. Angular · TypeScript · Node.js · Express · PostgreSQL · Leaflet · PayPal · OpenAI API

Patient Booking PWA Patient side of the booking platform above: private or SSN bookings confirmed against each centre's management system, expiring pre-bookings checked remotely, reconciliation of local and remote copies, card payment and Apple Wallet pass; a shared PostgreSQL register plus a SQL Server database per centre, created from a 5,587-line template. Public reconstruction on GitHub. Angular · TypeScript · Node.js · Express · PostgreSQL · SQL Server

Conversational Booking Agent LangGraph state graph behind a FastAPI service, with typed tools for availability, booking, opening hours and prescription upload; prescription number and tax code read from a photo with OCR-error correction; handover to a person on request or outside its domain. Public reconstruction on GitHub that runs with no model or API key. Python · LangGraph · AI agents · LLM · FastAPI · Uvicorn · Pydantic · REST API

AppleSmart Production platform across nine installations, eight client portals and a central service: doses worked out from cold-store volume along an interpolated curve, concurrency-safe document numbering with no duplicates or gaps and idempotent retries, lot-level stock and scripted, read-only-by-default deployment. WordPress · PHP · MySQL · Gravity Forms · GravityView · Elementor Pro · REST API · WP-CLI · PowerShell

EDUCATION & LANGUAGES

2005–2010 Scientific high school diploma — Liceo Scientifico Albert Einstein

2010–2013 Computer Engineering studies (no degree) — Università degli Studi di Catania

2021 Course: Node.js & Express Microservices — Udemy

2020 Course: Angular & Ionic Full-Stack Development — Udemy

Languages Italian — Native

English — Professional working proficiency: advanced written, conversational spoken