



Luigi Balotta

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● ABOUT ME

Senior Full-Stack Software Engineer with 11 years of experience across the full delivery cycle, from architecture to production. I currently build Mindicity, a Smart-City Urban Intelligence platform used by Italian municipalities.

There, I designed and built the platform's plugin-based backend engine and have personally authored or led several of its roughly 30 domain microservices. I have led development of Manager, the platform's flagship admin application, since 2023 — contributing 70% of its commit history — and architected the foundation of its dashboard application, Dashboard-NG.

I have deep experience across Angular/TypeScript, NestJS, microfrontend and microservice architectures, and geospatial visualisation (Leaflet, CesiumJS), and I gravitate toward owning problems end-to-end rather than working within a narrow specialisation.

● WORK EXPERIENCE

SENIOR FULL STACK DEVELOPER – FABBRICA DIGITALE – 01/12/2022 – Current – CASALMAGGIORE, ITALY

Senior full-stack engineer at Fabbrica Digitale, TIM Group's technology partner for Mindicity — an Urban Intelligence Platform delivered as SaaS to Italian municipalities, listed on Developers Italia (EUPL-1.2, AgID-recognised).

Key contributions:

- Designed and built `api.core.engine`, the shared plugin-based NestJS backend foundation used across all platform APIs, replacing a legacy system; created and lead-authored several of the platform's domain microservices (mobility, transit, IoT, realtime data).

- Founded the architecture of Dashboard-NG (dashboard modules, an interactive 2D map with Leaflet, a 3D geospatial viewer with CesiumJS) and remain a dominant long-term contributor to Manager, the platform's flagship admin application, across 3.5+ years.

- Lead frontend engineer on the platform's microfrontend (MFE) architecture built with Angular, Module Federation and Nx monorepo; each widget and manager section is independently versioned and deployable. Built a custom Nx schematic/generator used to scaffold new Manager MFE apps.

- Drove CI/CD and infrastructure modernisation, propagating a GitLab CI and OCI-registry (Harbor/ORAS) distribution pipeline across 14+ widget repositories.

- Practice AI-augmented, spec-driven engineering: use Claude Code and Kiro for spec-driven development across the platform, including production changes shipped with full automated test coverage (e.g. a JWT-privilege filtering feature with 1,150+ passing unit tests).

- Designed and built Control Center, a cross-tenant "app-store"-style architecture prototype (NestJS/Fastify backend and Angular 20 frontend, including an embedded MCP server for AI-agent access), as a personal initiative.

- Worked with Apache NiFi for data pipeline orchestration and Kubernetes (via Portainer) for deployment management.

Stack: Angular, TypeScript, NestJS, Python, Module Federation, Nx, CesiumJS, Leaflet, Apache NiFi, Kubernetes, Docker, GitLab CI.

FULL-STACK SENIOR SOFTWARE DEVELOPER – THE BB'S WAY – 20/12/2019 – 30/11/2022 – PARMA, ITALY

Full-stack software engineer at a digital agency delivering custom web and mobile solutions for SME clients across Italy.

Key contributions:

- Designed and implemented a centralised Single Sign-On (SSO) platform (internally branded Odino), enabling unified authentication and permission management across multiple client web applications.
- Built a headless CMS architecture for AB Export: Joomla as content API backend, Next.js as decoupled frontend. Integrated SDI-compliant electronic invoicing.
- Developed a product configurator for RM Premiazioni (trophies and recognition awards), allowing customers to customise and preview products before ordering.
- Delivered iOS apps in Swift 5 and cross-platform apps with Xamarin.Forms, all integrated with the SSO system.
- Built Sports Fund, a crowdfunding platform for sports teams.
- Contributed to an iOS accident-reporting app for INAIL ("Progetto Regionale").
- Maintained and extended multiple WordPress sites with custom plugins and integrations.

Stack: Angular, .NET Core, Node.js, PHP with CodeIgniter, Swift 5, Xamarin.Forms, Firebase, Django, MySQL, SQLite, jQuery, SCSS, HTML.

FULL STACK DEVELOPER – TRANSFER OIL – 03/02/2019 – 19/12/2019 – SACCA, ITALY

As the only web-developer of the company, I developed some web application/utility, mainly for the IT department.

- .NET Core API servers with SQLServer/MySQL databases. Sometimes I used also AS400 to retrieve or write data from some utility applications.
- I was hired to develop a new public website for the company and a private website for customers, the goal was to let them use that portal instead of sending pdf for invoices.
- Used Python 3.7 with Django REST Framework for small internal tools, self-taught during downtime.

FULL STACK JUNIOR DEVELOPER – EXELIS SRL – 08/11/2016 – 02/02/2019 – BAGNOLO IN PIANO, ITALY

Exelis is a company that works in media advertising. The channels we served were Radio, TV, Internet, and Newspapers.

- Using ASP.Net MVC 5 (.NET Framework) we made all of our software. SQL Server as Database. Occasionally we used Oracle as database.
- I made [Lilium](#), a web application that could handle newspaper advertising, in particular **obituaries** and other types of ads (like "I sell home", "Looking for a job" etc..)
- I used ASP.NET for the entire application, XSL FOP for rendering the ads as if it was on the newspaper. The application communicate with Hedera (a Mago4 IT management software extension) to handle the costs of an AD.
- I made [Larix](#), a web application to handle **outdoor advertising campaigns**.
- The most difficult part of this software was to calculate in a specific period where you could put a billboard and how much space (m²) was left for another campaign.
- I achieved **MCSA Windows Server 2016** certificate.

SOFTWARE DEVELOPER INTERN – TRANSFER OIL – 08/09/2015 – 16/02/2016 – SACCA, ITALY

● **EDUCATION AND TRAINING**

12/09/2010 – 25/06/2015 Casalmaggiore, Italy

SOFTWARE DEVELOPER Istituto Tecnico Informatica e Telecomunicazioni - Opz. Informatica - G. Romani

Address Via Trento, 15, 26041, Casalmaggiore, Italy | **Website** <https://www.poloromani.edu.it/>

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B1	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **SKILLS**

Angular | TypeScript | JavaScript | Node.js | NestJS | Module Federation | Nx | CesiumJS | Docker | Kubernetes | Apache NiFi | MongoDB | Git | PYTHON | .NET Core | C++ | MySQL | Microsoft SQL server | PHP | WordPress | Bootstrap 4 | TailwindCss | Next.js | Django | Swift | SwiftUI | Xamarin Forms | Unity3D

● **DRIVING LICENCE**

Driving Licence: B

● **JOB-RELATED SKILLS**

Job-related skills

- Full-stack architecture across Angular, NestJS and Python, including plugin-based backend systems
- Microfrontend development with Module Federation and Nx monorepo
- 3D/2D geospatial data visualisation with CesiumJS and Leaflet
- REST API design across NestJS and Python services
- CI/CD pipeline design, container-registry distribution and Kubernetes deployment (GitLab CI, Docker, Harbor/ ORAS)
- Data pipeline orchestration with Apache NiFi
- Spec-driven development from Figma designs and YouTrack issues

● **ONLINE PRESENCE**

Online Presence

- GitHub: <https://github.com/LuigiElleBalotta> — published open-source work including an Angular JSON-Schema-to-form library (@elle96/ng-json-schema-manager) with versioned npm releases and CI/CD
- Portfolio: <https://luigiellebalotta.github.io> — additional engineering project write-ups
- LinkedIn: <https://www.linkedin.com/in/luigi-balotta-4304a5123/>