

Paolo Ottana

Software Architect & Staff Engineer

Senior Architect & Senior IC · Balsamiq · 2011-Present

I've spent more than 20 years building software, and my focus has settled where everyday coding meets technical direction: the architecture, and the decisions we still live with years later.

The first decade was C++, in a 3D CAD engine. The rest is Balsamiq: product, infrastructure, developer experience, and lately AI.

Most of the work now involves AI: in how we build, where I code with agents daily and contribute to the team's agent skills and best practices, so the speed never costs us control, and in the product, where we shipped a custom AI agent handling around 800 real conversations a day.

I do my best work close to the product, owning the architecture. Fourteen years fully remote, well before it was the default, taught me to keep distributed teams engaged through long projects.

20+ yrs engineering, across two careers	3 platforms shipped from one portable core	~800 /day AI interactions in production	10+ yrs the Balsamiq Wireframes v4 architecture still ships the product
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SELECTED WORK

Systems I've owned end to end. Most are still running in production.

ARCHITECTURE

Took Balsamiq's AI from prototype to production

As a core developer and architect, I designed and built the LLM backend behind Balsamiq's AI: the workflows, an MCP layer so the model can act on product data and core logic, and guardrails on its output.

The image-to-wireframe workflow, which I first prototyped years before the current AI wave, is now the AI feature customers are happiest with.

~800/day AI interactions in production

LLMs · Gemini · MCP · Claude Code · AI agents · Agent skills

ARCHITECTURE

Core architect of the Balsamiq Wireframes 4 rewrite

Co-architected the Balsamiq Wireframes v4 rewrite: a portable vanilla-JS core model with platform abstraction layers, a platform-agnostic canvas rendering engine (SVG on web, native Core Animation on macOS), and modular native UI for each platform.

Shipped across web, macOS, and Windows; a decade on, that architecture still ships the product.

3 platforms, one core 10+ yrs still shipping the product

JavaScript · React · Platform abstraction · SVG · Core Animation

PLATFORM

Built and ran Balsamiq's macOS app, end to end

I was the main developer of Balsamiq's macOS app (Swift and Core Animation), and I owned the remote build-and-release system that runs on the Mac machines.

The macOS app I built is still sold and in use today, 8+ years on.

8+ yrs macOS app, still sold

Swift · Core Animation · macOS · CI/CD

PERFORMANCE

Rendering performance, end to end

Drove rendering performance end to end: client rendering optimization, a re-architected canvas rendering pipeline, and a headless rendering engine (skia-canvas) that generates PNGs from model files on the Node server, no browser needed.

Replaced the custom headless-Chromium build we maintained on AWS Lambda, and gave the AI stack eyes: it renders the outcome of AI edits into logs and evals, and draws finished wireframes directly in the agent chat via MCP.

Canvas · skia-canvas · Node.js

ARCHITECTURE

Large-scale TypeScript migration of the Balsamiq Wireframes v4 codebase

Solo, I rebuilt 80+ UI "control" classes from JS prototypes into a full TypeScript class hierarchy — a ~100K-line subsystem — with almost zero regressions, and drove the codebase-wide JS→TS conversion.

80+ classes, ~100K lines migrated solo, almost zero regressions

TypeScript · JavaScript

BACKEND

Built Balsamiq's e-commerce, billing, and licensing backend (Olio)

I was the sole builder of Olio, Balsamiq's commerce backend: purchases, upgrades, invoicing, billing, license keys, and the licenses database.

Up to \$4M/yr in subscriptions & desktop licenses, tens of thousands of customers

AWS · EC2 · Linux

WHERE I'VE BEEN

Two companies in 25 years. I like to commit and go deep into the domain.

2011–
Present

15 yrs
REMOTE

Balsamiq

Senior Architect & Senior IC

- Joined as the second software engineer, when the company ran completely flat. Grew with it through every phase of its bootstrapped, profitable life, treating the company itself as a product and iterating on its culture, processes, and values with a kaizen mindset.
- Senior architect and IC on Balsamiq's product, shipping across client rendering, server-side services, product features, AI agent design, and MCP.
- Contributed to evolving the product operating model, a custom Shape Up (shaping, betting, fixed build/cooldown cycles) — and work inside it, writing pitches and running experiments for new developments.
- Became the team's de facto architecture authority, setting technical direction that others build on, shaping the architecture of others' pitches through review, and coordinating frontend and backend groups on API definitions through to shipped features.

2001–2011

10 yrs
ITALY

Think3

Software Engineer · Code Owner (History & Features)

- Code owner of the history-and-features subsystem, the parametric modeling core, of one of Italy's reference 3D parametric CAD products.
- Worked in C++ across a very large codebase: a single DLL of 60MB+.
- Part of a several-hundred-engineer organization distributed across Bologna, Pesaro, and Bangalore.
- Flew to Bangalore with the VP of Engineering to run a training session for the India team. It was a formative cross-site experience.

WHAT I REACH FOR

The short list — what I actually use, not everything I've ever touched.

Day to day it's **TypeScript** and **JavaScript: Node.js** on the server, **React** in the browser. AI runs through both sides: I build with **Claude Code** and agent skills, and the product ships both an AI agent and a standalone **MCP** server for your own LLM.

The practices matter more than any single tool: software architecture, graphics and rendering performance, real-time and distributed systems, API design and integrations, LLM engineering.

The best tool I know isn't on this list: working next to people I can learn from. Pairing on a hard problem, arguing a design out loud, review as a conversation. Twenty years in, that's still the part I enjoy most.

HOW I WORK

A few things I care about that don't fit in a skills list.

AI-augmented engineering, without giving up control

Uses AI as a team multiplier while staying deliberate: tools serve the goal, they don't replace judgment, and they aren't a bandwagon to chase. Sometimes switching AI off and pairing with real people is the way to regain touch.

Team play, and a few hard-won principles

The real multiplier is the team, not the lone genius. Argue hard, then commit fully once the call is made; stay long enough to go deep.

Learn-it-all over know-it-all

Things change fast, in tech more than anywhere, and plenty of it is momentary trend. What I know today will be obsolete in months, so the thing worth cultivating is the ability to learn: look at what's new with a balanced eye, drill into the details when that's what it takes to grasp the sense of it. What sticks are principles and the learning attitude.

Calm beats frantic

Sustainable pace over grind. I've been through high and low tides, and steady wins. Not everything is ASAP, and burning people out was never a plan.

PERSONAL PROJECTS

What I build on my own time, mostly to learn.

ariostea Local-first RAG over my Obsidian notes, exposed to AI agents as an MCP server: hybrid retrieval (multilingual embeddings + BM25, reciprocal-rank fusion) on sqlite-vec, fully offline.

skills Personal collection of Claude Code skills: reusable AI workflows and best practices for agentic coding.

claude-session-manager Claude Code plugin to track and resume parallel development sessions across repo copies: auto-captured sessions, resume briefings, a cross-repo dashboard, knowledge search, and a web management UI.

morphogen A GPU learning playground: growth simulation in Zig where cells self-organize into branching, tree-like structures through local rules and volumetric raymarching.

GET IN TOUCH

Let's talk.

After quite some time I learned to care less about the stack and more about the shape of the work: concrete problems, a team that trusts each other, software people are glad to use, no dark patterns, the privilege of reconciling this kind of work with a profitable and sustainable business. Every technology I've worked in — desktop, web, AI — was learned because the work asked for it, and that's still how I like it. I don't send many applications; when I write, it's because something about what you're doing caught me.

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WHAT I'M LOOKING FOR

- Roles where product design, engineering, and real impact meet, hands-on, with room for technical ownership and architectural influence as a senior IC.
- Environments that treat AI as a way to multiply a good team, adopted deliberately, with judgment and control.
- Fully remote, based in Italy, building on a career spent largely in distributed teams.
- Currently employed, but always open to a genuinely compelling role.