

Bart Zyglowicz

Product Engineer / Applied AI · Remote · Warsaw, Poland GMT+1 / CET

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PROFILE

Product Engineer with 10+ years across frontend, backend, and product. I build AI-enabled products where models are embedded into real workflows, not bolted on as features. Recent work: an agent system that runs live marketing for a real product, and a full-stack e-commerce platform with AI image processing. Earlier: ML tooling and large-scale A/B experimentation at Booking.com. Strongest in TypeScript, React, Next.js, Node.js and PostgreSQL.

SELECTED AI & AGENT PROJECTS

AI Marketing Agent System

Builder / Product Engineer · 2025–Present

TypeScript, Mastra, SQLite, Playwright, Docker, Python, third party integrations (Google, Instagram)

This system runs the marketing for Upscale Print. It plans content, generates creative, evaluates quality, and publishes to Instagram. The @upscaleprint account is managed almost entirely by this system. Architecture separates reasoning (TypeScript/Mastra) from execution (Python worker) with shared SQLite as the control plane.

- Architecture: Two-process system separating LLM reasoning (TypeScript/Mastra) from deterministic execution (Python worker) with shared SQLite state as control plane, audit trail, and job queue
- Agent design: Specialist agents for planning, creative generation, copywriting, evaluation, and channel analysis across Instagram and Google Ads
- Tool calling: 20+ typed tools with structured I/O schemas wrapping external APIs - image generation (fal.ai), video composition (FFmpeg), publishing, metric collection
- Quality gates: Vision-model evaluation with auto-retry loops for brand consistency; HTML/CSS overlay compositing rendered via Playwright for reliable text/logo placement on generated assets
- Operational control: Approval-gated spend changes, health monitoring, scheduling, retries with backoff, and observable audit trails

Upscale Print

Builder / Product Engineer · 2025–Present · upscaleprint.com

Next.js, PostgreSQL, Stripe, Topaz/Replicate/Prodigi

Live e-commerce product that turns phone photos into gallery-quality wall art. AI handles image analysis and enhancement behind the scenes, connected to Stripe payments and print fulfillment through Prodigi. I built and operate the entire stack.

- Designed a webhook-driven processing architecture with idempotent background jobs, retry/backoff handling, failure alerting, and follow-up task creation across Stripe, Topaz, Prodigi, and storage systems
- Implemented image-processing routing logic combining quality assessment and object detection to choose enhancement settings dynamically based on source image characteristics and print requirements
- Shipped the full customer journey: purchase flow, authenticated dashboard, admin tooling, internationalization, analytics instrumentation, and Playwright e2e coverage

EXPERIENCE

Cohabs

Product Engineer · 2021–2025 · Remote, Brussels

Next.js, React Native, Node.js, Nx monorepo

- Owned web experience end-to-end: designed, built, and iterated member-facing flows using Next.js with Node.js services and multiple third-party API integrations
- Led multiple iterations on conversion-critical funnels using analytics and qualitative feedback, shipping measurable improvements
- Built internal back-office tools that reduced manual work for operations and content teams
- Refactored key Node.js services, reducing regressions and making the system easier to extend
- Contributed to React Native mobile app: concept design, UX alignment, technical implementation

HiCoach

Founding Product Engineer · 2020–2021 · Remote, Warsaw

React Native, Next.js, Node.js, GraphQL, PostgreSQL

Created full product from concept to launch as part of founding team including product direction, UX design, backend API, and two frontend implementations.

- Designed and built GraphQL API on PostgreSQL, video-heavy React Native app, and Next.js web experience
- Worked across product decisions, user experience, and shipping the MVP with a small team

Booking.com

UX Engineer · 2014–2019 · Amsterdam, Netherlands

JavaScript, HTML/CSS, A/B experimentation platform, ML tooling

- ML tooling: Led design and implementation of internal machine learning tooling used across the organization. Built model catalog, documentation interfaces, and playground surfaces for data science teams
- Experimentation: Ran multiple successful A/B experiments on Booking.com's main funnels (mobile, tablet, desktop), improving conversion and UX at massive scale
- Visitor Profiling: Built interfaces for ML-driven personalization systems, working on experiences informed by ML models
- Led technical training and spoke at internal events to promote machine learning adoption across the company

EARLIER EXPERIENCE

Senior UX Designer · GG Network · 2011–2014 · Led complete redesign of desktop and mobile messaging apps for Poland's largest instant messenger (5M+ users)

Developer & Product Designer · GoldenLine.pl · 2007–2011 · Full-stack development and product design on core features for Poland's largest business social network (1.5M+ users)

TECH KEYWORDS

Languages: TypeScript, JavaScript, SQL, HTML/CSS

Frontend: React, Next.js, React Native, Tailwind CSS

Backend: Node.js, tRPC, REST APIs, GraphQL, PostgreSQL, SQLite, Drizzle ORM, Playwright

Applied AI: LLM orchestration & tool calling, structured outputs, agent workflows, prompt engineering, vision models, RAG, image/video generation, multimodal evaluation, quality gates, evaluation

Product: A/B experimentation, funnel optimization, UX design, product strategy, end-to-end ownership