

# Igor Bartenev

CTO · Software Architect · Backend Developer

Python · FastAPI · PostgreSQL · Elasticsearch · Redis

[bartenev.site/en/](https://bartenev.site/en/)

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CTO at Onlihub since November 2023, actively involved in architecture and implementation. I turn complex business requirements into modular systems: data models, backend services, integrations and automation. I work directly with stakeholders, explain technical trade-offs and take solutions through delivery. My focus is commerce, business operations, large-scale data processing and AI agent infrastructure.

## RELEVANT EXPERIENCE

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### Onlihub / February 2022 - present

CTO · previously Lead Developer

Own technical decisions and hands-on development for a commerce platform. Redesigned application and database architecture, coordinated a small cross-functional team and worked directly with the CEO on feasibility and delivery.

Implemented backend services linking supplier catalogs, marketplace listings, stock, orders and fulfillment. Modelled external identifiers and synchronization rules so operations could span systems with different data and update cycles.

## CAPABILITIES IN PRACTICE

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### Configurable business processes

Designed and built a platform used by a mortgage company alongside Encompass. Configurable intake forms, document OCR, staff tasks and compensation rules connected client applications to internal operations. Clients answered once and saw the required documents; staff gained assigned work with less manual coordination.

BOS

### Large-scale data collection

Designed parallel scanning, proxy/account coordination, normalization and Elasticsearch bulk processing. The archived marketplace-data project handled millions of listings over approximately five months (historical scale reported from my work).

Amazon Data / Trends

### Controlled access to tools for AI agents

Built MCP Hub for tool discovery, schemas on demand, retained results and permission-aware execution; I use it daily. Separately, my open-source Unity integration reduced 48 model-visible tools to 6 while retaining access to 377 operations. Its schema benchmark is public.

MCP Hub    Unity MCP Efficient

## CURRENT TECHNICAL CAPABILITIES

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### Backend & data

Python, FastAPI, SQL, PostgreSQL, Elasticsearch, Redis; Rust catalog service; complex queries, constraints, triggers and TTL caches.

### Architecture

Domain modelling; modular services; ports & adapters; document workflows, formulas, permissions; idempotency and recovery.

### Integration & operations

REST, webhooks, OAuth, WebSocket; workers, task queues, batch pipelines; Docker, Linux and production debugging.

### AI infrastructure

MCP, tool discovery and orchestration; local embeddings and hybrid retrieval; context budgets, approvals and execution history.

## WORKING APPROACH

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Clarify the business goal, propose alternatives and explain the trade-offs. Design and implement the solution, then refine it with the business. Keep domain rules explicit, module boundaries clear and failures recoverable.

## CROSS-DOMAIN EXPERIENCE

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TON Tanks: product, backend and launch work on a Telegram / TON game. Further work includes Unity vehicle systems, 3D assets and local speech / document AI experiments.

## EARLIER CAREER · BRIEF

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### Artekom / January 2020 - February 2022

Software development & business automation

ERP and API automation with 1C; Python products from 2021, including Telegram workflows and a trading terminal.

### Technopark Pozh Tekhnika / 2013 - January 2020

Manufacturing engineering → ERP automation

Manufacturing engineering; from February 2019, 1C automation of production planning, materials and payroll.

## EDUCATION

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### National Technical University “Kharkiv Polytechnic Institute”

Specialist degree / 2008-2014

Automation and Computer-Integrated Technologies

Full portfolio & implementation details