

Kondrat Shmoylov

Senior Full-Stack Engineer,
Software Solution Architecture & Technical Leadership

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PROFILE

Engineer in Zurich with more than 20 years of building software products and the systems that let teams ship them reliably: services used by millions at Yandex, a regulated fintech platform at Crowdhouse, and now LightlyStudio, an open-source platform for computer vision and robotics data. I returned to a hands-on role by choice, close to both the code and the product.

EXPERIENCE

Senior Full-Stack Engineer, Computer Vision & Robotics Data – Lightly AI

Apr 2024 – Present

TypeScript, Svelte 5, SvelteKit, Three.js, TanStack Query, Python, FastAPI, SQLModel, DuckDB, PostgreSQL, MCAP, ROS 2 data

- Wrote most of the initial version of LightlyStudio, an open-source platform for curating, labeling and debugging computer vision and robotics datasets, ahead of its public release in October 2025. Over 340 merged changes since.
- Designed the application architecture of the enterprise edition: how it integrates the open-source package, how authentication works and how the auth context is propagated through the application. Built user management and the admin dashboard on top.
- Researched how robotics teams curate and label LiDAR and camera data, then built the point cloud workflow with Three.js: cuboid annotation with heading, multi-frame point cloud accumulation, RGB projection from cameras onto the point cloud, annotations projected onto synchronized camera views, an object track timeline, and undo/redo for 3D annotations.
- Made very large MCAP recordings play back smoothly, reading camera and LiDAR data live from cloud storage, through parallel reads, caching of decoded frames and point clouds, and indexing of recordings in S3.
- Also built video support, text and image search over CLIP embeddings, and the model evaluation workflow.
- Set up the repository so AI coding agents follow our coding guidelines. Maintain CI/CD and Docker builds, and mentor engineers.

Engineering Manager / Senior Software Engineer – Crowdhouse AG

Nov 2019 – Feb 2024

TypeScript, React, GraphQL, Go, Python, AWS (SQS, CodePipeline), Snowflake, Docker, GitLab CI

- Introduced GraphQL federation, which let each team deploy on its own, and led the migration to TypeScript.
- Promoted to Engineering Manager in June 2021. Led a cross-functional team of 10+ engineers while still writing code, hired and onboarded 6+ engineers, and introduced 1:1s, performance reviews and a career progression framework.
- Led the Propportunity launch across several dependent workstreams, agreeing scope and trade-offs with product and management.
- Shipped Crowdhouse's first LLM feature, a recommendation service, from idea to production with monitoring and alerting.
- Built single sign-on and parts of customer onboarding, and developed the Crowdhouse design system, presented at Frontend Best Practices 2021.
- Ran incident response and post-mortems for a regulated product that needed a full audit trail.

Software Engineer / Front End Engineer – swisspeers, HolidayCheck, Nezasa

Feb 2016 – Sep 2019

TypeScript, React, Ember, Node.js, Scala, C# / .NET, PostgreSQL, MongoDB, Azure

- **swisspeers** (Nov 2018 – Sep 2019): developed the customer onboarding flow of a Swiss SME lending platform.
- **HolidayCheck** (Mar – Jul 2018): joined a small team building a new cruise-travel product from zero and developed its booking flow.
- **Nezasa** (Feb 2016 – Feb 2018): developed the itinerary planner and owned the travel platform's frontend; introduced TDD and CI.

Team Lead / Head of Front End – Yandex LLC

May 2005 – Feb 2016

JavaScript, Python, Java, Lua, XSL

- Joined as an engineer when Yandex had about 300 people and rose to lead the front-end department. Developed Mail, Maps, the home page and many other services used by millions.
- Cut core page response time from about 1s to 0.2s by moving rendering to server-side V8, on services handling hundreds of millions of requests a day.

SKILLS & EDUCATION

Programming	TypeScript/JavaScript, Python (FastAPI, SQLModel, PyTorch, pytest), Go, SQL; Svelte, Three.js, React, Node.js, GraphQL.
3D & robotics	Point clouds and LiDAR, cuboid annotation, camera-to-point-cloud projection, MCAP, ROS 2 data.
AI tooling	AI coding agents and agentic workflows, LLM applications, model and prompt evaluation, embedding search (CLIP).
Infrastructure	AWS, Docker, Kubernetes, GitHub Actions, GitLab CI, Snowflake, DuckDB, PostgreSQL.
Languages	English (fluent), German (B2), Russian (native), Spanish (basic).
Education	M.Sc. in Applied Mathematics and Computer Science, South Ural State University, 1998 – 2003
Side projects	An agentic system on OpenClaw that gives non-engineers smart task routing; a model for robot arms (in development).
Interests	Guitar and piano, photography, diving (PADI Advanced), robotics and agentic systems.