

ILLYA BAKUROV

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SUMMARY

Engineering leader and hands-on builder. Co-founder and CTO of a consumer AI venture. Raised \$3.2M, grew the engineering organization from two founders to a team of nine, owned the vendor and partner relationships behind it, and shipped a voice and SMS assistant used by 40,000 people that scheduled reminders, generated images, booked rides, and placed orders. Eleven years building consumer products at scale, including nearly four years on regulated financial products, two-plus of them leading RBC Wealth Management's client applications, and two leading camera design engineering at Snap.

EXPERIENCE

Co-Founder & CTO · Santa's AI Lab santasailab.com · stellafoster.com · outsideagent.ai

Oct 2023 – Present

Consumer AI venture. Raised \$3.2M from Floodgate and Rainfall. Owned all engineering through three years and four major product pivots.

LEADERSHIP

- **Built and led the engineering organization** from two founders to a team of nine across engineering, QA, and DevOps, plus a three-cohort QA internship program run through my QA leads. Owned hiring, performance management, and org design throughout.
- **Defined the engineering operating model:** a two-track development lifecycle separating growth experiments from stabilized core primitives, explicit engineering/QA ownership boundaries, automated daily ship digests, and P50/P95/P99 latency SLOs measured independently of carrier delivery.
- **Authored the product specification system,** a numbered PRD series cross-referenced to a decisions log, covering the platform's trust, safety, and determinism contract: identical input and system state must produce identical behavioral outcomes, with no silent state changes and every transition logged for audit.
- **Owned vendor and partner relationships:** negotiated enterprise agreements with Twilio and Google, and closed a direct partnership with Uber Health giving API-level access to place rides. Integrated and managed 15+ third-party platforms including Stripe, Amazon, Composio, Temporal, and Langfuse; ran competitive evaluations and provider migrations as the market shifted; and held early-access relationships with model providers, testing OpenAI's realtime voice ahead of its public release.
- **Sourced the investors for the \$1.2M seed round** and served as the engineering voice to the board through three years and four pivots.

PRODUCTS

- **Stella Foster.** A consumer AI assistant reachable by call or text from any phone, including flip phones and landlines. Booked Ubers, ordered from Amazon, placed calls and sent messages on users' behalf, and generated and edited images mid-conversation across voice and SMS. Found its audience among seniors and observant religious communities where flip phones and restricted devices are the norm. 40,000 users · 345K calls · 8.4M messages · 32% week-eight retention.
- **Outside Agent.** A platform that lets a developer's own coding agent build and deploy production agents across web, SMS, voice, and email. Underneath it, an event-sourced, replay-stable runtime with metered billing, driven through a 77-tool MCP with no second model in the loop.
- **Eight further products** across the earlier pivots, including consumer AI chat, a face-match iOS app, a voice-to-newsletter web and iOS app, and a health vertical, shipped across mobile and web.

SYSTEMS & TECHNICAL DIRECTION

- **Re-architected the messaging runtime so conversations survive failure.** Per-message jobs guarded by database locks were contending under load, handling the same message twice and losing updates. Replaced them with one durable workflow per conversation on Temporal, so new messages join the process already running and every step resumes after a crash instead of repeating. Added a CI gate that blocks any code which would behave differently on replay.
- **Solved interruption on a channel with no stop button.** Chat products let a user halt a running action; SMS does not, and messages keep arriving mid-task. Designed a threading system in which a lightweight classifier routes each inbound message against work already in flight, deciding whether it extends, edits, cancels, or starts an action, so conversations stayed coherent instead of forking.
- **Built the payments layer that let an autonomous agent spend real money safely:** an ACID stored-value ledger with integer precision, spend gates, and two-step voice confirmation on Stripe and Twilio Pay, sequenced to land before real-money Amazon and Uber transactions went live.
- **Architected the multi-agent execution model:** a planner that produces a dependency graph and a deterministic executor that runs it with no model in the loop, with model-generated code confined to a hardened sandbox.
- **Re-platformed live voice from a cascaded speech pipeline to native speech-to-speech** for lower latency and much stronger multilingual handling, including switching languages mid-sentence.
- **Led the codebase through a full JavaScript to TypeScript conversion ahead of scaling the team,** on a live product with users on it. Types constrain what AI coding agents can hallucinate, make the system testable, and give durable workflows the stable payloads they require. Completed with no type suppressions anywhere in the migration.
- **Established the model evaluation and red-team program:** 1,621 cases across offline, live voice, and live SMS, with adversarial suites covering regulated domains and jailbreak strategies, gated in CI at a 90% pass rate under a fixed cost budget.
- **Stayed hands-on throughout:** wrote most of the backend in the early years, later shifting to orchestrating AI agents, skills, loops, and the engineers on the team, without losing shipping velocity. Built the macOS desktop client in native Swift and the GitHub App that gates every pull request; led development of the mobile, watch, and web clients.

Senior Software Engineer & Advisor · Feels feelsmusic.com

Oct 2022 – Oct 2023

- Led iOS, Android, and web development; managed the outsourced development vendor, then transitioned the work in-house and hired the team that took it over. Led QA and content-quality functions.
- Built a content management platform in React and Node.js; prototyped ML features including smart search and media synchronization.

Camera Lead Design Engineer · Snap Inc.

Apr 2020 – Sep 2022

- Led and mentored a team of 3 design engineers across Camera, Creative Tools, and Memories; partnered with product managers, designers, and user researchers on product strategy and annual roadmaps.
- **Designed and prototyped the Preview Filter Carousel (64M daily users)** and drove it through engineering to launch: +38% filter impressions on iOS and +10% on Android; +9% and +5.4% Snaps sent with filters.
- **Designed and prototyped Creative Tools used ~1.7B times daily**, partnering with engineering through to ship: Voice Over (300K DUU), Auto-Caption (300K DAU), Text-to-Speech, Crop, Stickers redesign, Universal Search.

Co-Founder & Head of Mobile Development · Story Star

Dec 2015 – May 2020

- **Built and led development of 20+ iOS and web applications** across social networks, audiobooks, video editing, utilities, and games. The most popular reached 250K+ monthly users and the most profitable \$20K+/month. Spotlight was acquired by Snap and launched as a core feature in Snapchat.

Senior iOS Developer & Tech Lead · RBC Wealth Management

Dec 2017 – Apr 2020

- **Led development of wealth management client applications:** 25,000 daily active users, \$463B in assets under management, under bank-grade security and compliance requirements.
- **Both shipped products won “Best Private Bank for Digital Client Communication in North America”** at the inaugural Global Wealth Tech Awards.
- **Partnered with RBC, City National Bank, and IBM executives** to assess an outsourced engagement and transfer development of the City National Bank application in-house.

Earlier: Senior iOS Developer, Kinetic Commerce (2017) · Co-Founder, Eventlime (2015–2017) · Graduate Teaching Assistant, Brock University (2015–2017) · iOS Developer, Agency SM.Art, Kyiv, on banking and insurance apps (2014–2016)

SKILLS

Languages TypeScript, JavaScript, Swift/SwiftUI, Kotlin, Python, Go, SQL, Objective-C, C++

Frontend React 18/19, Next.js, React Native (Expo), Tailwind, Vite

Backend Node/Express, tRPC + zod, Temporal, Postgres/Drizzle, Firestore, event-sourced runtimes

Infrastructure GCP (Cloud Run, Cloud Deploy, Cloud SQL), Terraform, Docker, GitHub Actions, KMS, Workload Identity Federation

Payments & Data Stripe, Twilio SMS/Voice/Pay, ledger and idempotency design, PostHog, Langfuse

SPEAKING, WRITING & COMMUNITY

- **TEDxPacific Avenue:** speaker and event organizer. **LA Tech Week 2025:** speaker, “Seniors Want AI.”
- **Snap Design Academy:** product design mentor, two consecutive years. **Teens Exploring Technology:** guest speaker on design and product.
- **Stella Foster featured on KTLA (Nexstar)**, covering seniors learning to use AI over a phone call.
- **Author of Bruno the Fox and the Butterfly**, a children's book published in English and Ukrainian.

EDUCATION

MSc Computer Science, Brock University. Springer-published GPU genetic-programming research.

BASc Computational and Applied Mathematics, National University of Kyiv-Mohyla Academy.

Post-Graduate Certificates, University of Toronto: Financial Analysis & Investment Management; Financial Trading & Option Strategies.

Leadership Development for Building High Performing Teams, USC Marshall School of Business. Taught by Professor David Logan, who subsequently joined Santa's AI Lab as an advisor.