Luka Krestinin

Chicago, IL • me@lukres.dev • **lukres.dev** • github.com/LuKresXD • linkedin.com/in/lukres

Education

University of Chicago Chicago, IL | Expected Jun 2029
B.S. in Computer Science and Mathematics, second year • GPA 3.67/4.0 • Jeff Metcalf Internship Program, 2026
Coursework: Abstract Linear Algebra, Introduction to Proofs in Analysis, Calculus I–III, Systems Programming I–II, Intro to Computer Security; Autumn 2026: Analysis in $\mathbb{R}^n$ I, Discrete Mathematics, Mechanics
Student Organizations: Algo Group • UChicago Robotics • Blockchain Chicago

Letovo School Moscow, Russia | 2020–2025
IB Diploma (2025), 43/45
Higher Level: Mathematics AA, Computer Science, English • Standard Level: Physics, Business Management, Russian

Certifications: Cryptography I (Stanford/Coursera), 2024 • Hack The Box Labs & Academy, 2024–2025

Experience

Teza Technologies — Quant Research Intern Austin, TX | Jun 2026–Aug 2026

- Researched systematic equity signals on a three-intern quant research team supervised by a quant researcher: built feature pipelines from fundamental filings and alternative data, and trained gradient-boosted and tabular neural models (**XGBoost, LightGBM, RealMLP, TabM, PyTorch**) with walk-forward, out-of-sample evaluation in **Python** and Jupyter.
- Built the team's **statistical validation harness**: point-in-time data, purged/embargoed cross-validation, net-of-cost and capacity checks, deflated Sharpe, probability of backtest overfitting and false-discovery control across large candidate sets, with a test-once sealed out-of-sample window; found and voided several look-ahead leaks before results shipped.
- Engineered the research infrastructure: automated data pipelines (**Bloomberg**, **SEC EDGAR/XBRL**, vendor APIs), an additional execution tier that more than doubled research throughput, a large concurrency gain in the extraction pipeline, and a two-day multi-year vendor data pull done in under an hour. Owned the end-of-summer recap deck and the full data handoff.

Veto — Co-Founder & Lead Engineer Chicago, IL | Mar 2026–Present

- Co-founded **runtime authorization for AI agents**: before an agent runs a tool call, Veto checks it against developer-set policies (which tools, what parameters, how often, when); nothing is allowed by default. I write all of the software.
- Designed the default-deny **policy engine** with five rule types (allowlists, parameter constraints, rate limits, time-based access) deciding in **<10 ms** on **Cloudflare Workers** across 300+ edge locations, with an append-only **audit log** and automatic PII redaction.
- Shipped typed **Node.js and Python SDKs** to npm and PyPI with **MCP middleware** (Model Context Protocol) for drop-in authorization of Claude, GPT and other MCP-compatible agents; REST API with dual auth (API keys + JWTs).
- Built the **React dashboard** (Clerk auth, workspace provisioning), the landing page and a 20-page Mintlify docs site; deployed on Cloudflare Workers, Vercel and Neon Postgres with a CI pipeline (lint, typecheck, test, build) and 60+ automated tests. Ranked in the **top 10% of Y Combinator S26 applicants**.

JSA Group — Cybersecurity Intern Moscow, Russia | Jun 2024–Aug 2024

- Delivered 6 data-science analyses and security demos adopted by 4 stakeholders, cutting review time ~25%.
- Diagnosed network vulnerabilities with **Wireshark/Nmap**; built **Python/Node** automation scripts that resolved **12+ incidents** and saved ~**8 hrs/week** of manual triage.

Consolware GmbH — Machine Learning Intern Berlin, Germany | May 2024–Jun 2024

- Explored collaborative-filtering and content-based recommendation algorithms; built a **prototype** achieving **+16% top-5 precision vs. baseline** with a reproducible evaluation notebook.
- **Led** a 5-member team on ML solution design; communicated trade-offs to non-technical stakeholders, ran **3 offline A/B tests**, and informed a ~**20%** scope reduction that kept the project on schedule.

Projects (more at lukres.dev)

Senthos — Structured products on prediction markets **1st Place, Solana Track, SCBC 2026 ($7k) | Apr 2026**

- Bundles dozens of uncorrelated **Polymarket** positions that share a risk tier and resolution window into one token, sold as three tranches; principal-protected notes keep the deposit in a USDC yield vault and risk only the yield.
- Wrote the **Express backend** on live Polymarket data, the principal-protected-note flow, price alerts, the portfolio composer and the devnet deployment of two **Anchor** programs (**TypeScript, Solana**); eight days, team of four at USC.

Litter Critter — Autonomous litter-sorting robot **1st Place, Sustainability, MakeMIT x Harvard | Feb 2026**

- Robot that finds litter, picks it up and sorts it into trash, recycling or compost: a camera on a **Raspberry Pi 4** spots the item, **Claude** classifies it, the drivetrain closes in and a **VIAM robotic arm** bins it.
- Software lead on a 24-hour build among 269 builders (team of six): the Claude vision classifier, VIAM arm control, drive control and the search/approach/sort state machine (**Python**).

Claw — Personal AI chief of staff in Telegram **Open source (MIT core) | Apr 2026–Present**

- Every chat topic is its own isolated Claude Code agent with persistent memory; it reads mail, calendar, health and finance data, places phone calls through a realtime voice agent, drives a Mac behind a fail-closed Allow/Deny tap, and edits and redeploys its own source.
- Sole developer: **28,000+ lines of TypeScript** over **881 commits** in five months, 21 CLI tools, 39 systemd-scheduled jobs, Twilio voice, Tailscale Mac control. The June 2026 core is open source as claw-skeleton (MIT).

AutoStickers — Telegram purchase bot **Python/Node, Redis | Jun–Jul 2025**

- Bought tokenized sticker packs the moment they dropped: users topped up in Telegram Stars, set a max price and supply, and the bot bought the rarest packs first on a 20% commission. Founded and built alone: drop detection, sub-second **Redis**-queue checkout, balances and orders ledger. **$152k** bought for **2,300 users** in the first two days, no advertising.

IMC Prosperity 2026 — Algorithmic trading competition **Python, Pandas | Apr 2026**

- Built the UChicago team's local **backtester** to **98.3%** fidelity with live results after finding a timestamp-cap bug that had truncated 90% of each day's data; ran a **41-variant parameter sweep** across seeds, measured the noise floor and kept the baseline over overfit tuning.

Phishing Website Detector — ML web app **scikit-learn, Next.js | 2024–Present**

- Live URL scanner with two verdicts: VirusTotal's 70+ engines beside a **logistic-regression** model on **27+ URL/domain features**, trained on PhiUSIIL with SMOTE, **ROC AUC 0.96** on held-out data. Built alone in high school, live since 2024; model ported to TypeScript in-process on Vercel in 2026. MIT.

Spindle — Vinyl scrobbler on a Raspberry Pi **Python | Mar 2026**

- Fingerprints the turntable's line-out (AcoustID, ShazamIO) and scrobbles whole record sides to Last.fm; album-lock identifies one track, backfills what already played and predicts the rest of the side. ~4,000 lines of Python, offline queue, Telegram bot, LCD driver; built in four days with Claw. MIT.

SolveStream — Live video tutoring marketplace **Node, PostgreSQL, WebRTC | 2024–2025**

- Co-founded and built the product: question feed, booking and payments, moderation, real-time chat and file sharing, and **WebRTC** peer-to-peer video with a signaling server written from scratch. Reached **500 registered users**.

SpyLogger, Gifts Alert, Astro — Paid Telegram products **Python, aiogram | 2024–Present**

- SpyLogger tracks edited and deleted messages in real time with subscription tiers, referrals and Telegram Stars payments, live since 2024 with a paying user base; Gifts Alert republishes Telegram gift drops via userbot sessions; Astro sold Telegram Premium and Stars through a Next.js WebApp with TON payments.

Microfluidics Reactor — Droplet lab-on-a-chip **Arduino, OpenCV | 2023–2024**

- Led hardware and software on a team of four: four synchronized Arduino-PWM peristaltic pumps at ~$48 each, 50 µm resin-printed masters cast in PDMS, and an OpenCV tracker measuring 50–150 µm droplets at 0.5–2 mm/s in real time.

Skills

Languages: Python, TypeScript/JavaScript, C/C++, SQL
Data & ML: NumPy, Pandas, scikit-learn, XGBoost, LightGBM, PyTorch Geometric, Jupyter, Bloomberg Terminal/API, SEC EDGAR/XBRL
Infrastructure: Cloudflare Workers, Vercel, AWS, Docker, PostgreSQL, Redis, MongoDB, Neon
DevOps: Git/GitHub, CI/CD, Linux (Kali/Ubuntu), systemd, Tailscale
Security: Nmap, Wireshark, Burp Suite, Metasploit, Flipper Zero
AI & APIs: Anthropic API, MCP, Telegram Bot API, WebRTC, Clerk, Twilio, Mintlify
Spoken languages: English (fluent), Russian (native), German (basic)