

Ilia Duda

Open to a 6-month co-op (an off-cycle internship) from January 2027 in quant and risk, investments, investment banking or data science in finance; based in Boston, open to New York, San Francisco or London.

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Education	Northeastern University, College of Science Expected May 2028 B.S. Mathematics and Business Administration, Fintech concentration. Dean's List, Fall 2025. Coursework: Statistics & Stochastic Processes, Fourier Series and PDEs, Computational Methods & Applications in Finance, Investments, Fintech and Financial Innovation, Probability and Statistics, Linear Algebra; directed study (Spring 2026): Fourier-Bessel series and the vibrating circular membrane; in progress (Fall 2026): Interest Theory and Life Insurance, Strategy in Action. Bromsgrove School and The King's School, Canterbury. A-Levels including Further Mathematics.
Experience	Glacier Capital Systems , proprietary options trading firm · Jan 2026 – present Quantitative Analyst and Engineer – Build the tools that automate the firm's investment workflows for its traders: real-time dashboards, analysis tooling, and research tooling around the firm's proprietary options model. – Built a trade-validation service in Python and TypeScript that checks a proposed trade against the firm's written rules and returns a verdict with its reasoning. – Built the traders' real-time dashboards (Next.js, Supabase, a Python worker on Fly.io), replacing a cron-and-email pipeline; moved strategy configuration out of code. Debt-settlement portal , licensed Russian collection organisation · Jul 2026 – present Sole Developer and Project Lead – Only developer: debt lookup, a settlement calculator in integer kopecks, SMS login, an SBP payment screen. – Built to 152-FZ data localisation and the 230-FZ contact cap, both enforced in code; Next.js 16, Yandex Cloud. CloseBooks , month-end close for accounting firms · Founder Apr 2026 – present – Built and deployed alone a multi-tenant month-end close for CPA firms: Next.js, TypeScript, Supabase Postgres with row-level security, Stripe billing in three tiers. – Categorisation pipeline on the Claude API: parses CSV and PDF bank statements and maps each line to the client's chart of accounts with a confidence score; low-confidence rows go to a human. AdConfirm , advertising inside invoices and receipts · Co-Founder May 2026 – present – Co-founded a product placing ads inside invoices and receipts; built eight accounting and point-of-sale integrations onto one invoice type, a millicent billing ledger and Stripe Connect payouts. BCS Bank , Investment Banking Division · Investment Banking Intern Jul – Aug 2023 – Covered Russian energy, metals and banking; built DCF, comparable-company and sensitivity models. – Wrote daily briefings on OFZ, index activity and Bank of Russia policy through two rate rises in 25 days. Monito , Young Enterprise UK · Co-Founder and Financial Director 2022 – 2023 – Won UK National Company of the Year and reached the European Finals.
Research	Implied-volatility surface free of static arbitrage. A synthetic SSVI surface free of static arbitrage, with Dupire local volatility and Black–Scholes Greeks at any point, the no-arbitrage conditions asserted by tests on a dense grid; drawn live in raw WebGL2. cricstate. Leakage-audited T20 win-probability model, built on 4,748,382 T20 and ODI deliveries: gradient boosting on match state cuts held-out log-loss 29% below the base rate; temporal splits, leakage canaries in CI, paired bootstrap. One market, three views. A deterministic Hawkes limit order book in a Web Worker, bit-identical in Chromium, WebKit, Firefox and Node, driving Monte Carlo price paths and an arbitrage-free SSVI surface.
Skills	Quantitative Options pricing and Black–Scholes, Greeks, volatility surface modelling, calibration, temporal cross-validation, bootstrap intervals, hypothesis testing, Fama–French and CAPM regression. Languages Python (pandas, NumPy, SciPy, scikit-learn, PyTorch), TypeScript, JavaScript, SQL. English and Russian, both fluent. Platforms Next.js, React, Supabase (Postgres, Auth, Realtime), Vercel, Fly.io, Stripe, Yandex Cloud, Tailwind, Git, Jupyter; the Anthropic Claude API and LLM pipelines. Certifications Anthropic — Claude Code in Action; DataCamp — AI Engineer for Data Scientists Associate; IBM — Generative AI in Action; Yandex Practicum — Data analytics.