

SUMMARY

Quantitative Researcher / Trader building volatility models and backtested systematic strategies in Python. Strong foundation in probability, statistics, and stochastic calculus; comfortable taking a research idea from hypothesis through leakage-aware validation.

EDUCATION

- Moscow Automobile and Road Construction State Technical University (MADI)** Moscow, Russia
Studies in Robotics and Mechanical Engineering 2025 — Present
- Relevant coursework: mathematics, mechanics, engineering systems
- Bauman Moscow State Technical University** Moscow, Russia
Studies in Robotics and Mechanical Engineering (SM-9) 2020 — 2025
- Relevant coursework: Higher Mathematics, Probability Theory, Linear Algebra, Mechanics, Algorithms.

ADDITIONAL EDUCATION

- MSU-VTB Vega Institute** — Advanced Program in Financial Mathematics 2025 — Present
- Derivatives pricing, stochastic calculus, quantitative risk modeling; Black–Scholes, Brownian motion, Itô processes, martingale methods.
- Quantitative Research Course** — quant.courses Oct — Dec 2025
- Systematic trading research workflow (data preparation, hypothesis testing, validation); capstone project is the systematic strategy below.

COMPETITIONS

- **International Mathematics Competition for University Students (IMC)**

PROJECTS

- Volatility Surface Builder** *Python, FastAPI, Docker, scipy, Plotly* [GitHub](#)
- Built a Dockerized FastAPI backend that pulls live option chains via yfinance and reconstructs implied-volatility surfaces by non-parametric interpolation (`scipy.griddata`, linear with nearest-neighbor fallback) on a 40×40 grid, served through an interactive Plotly frontend.
 - Estimated the forward per expiry from put-call parity ($F = K + (C - P)/e^{-rT}$) and worked in forward log-moneyness $k_{fwd} = \ln(K/F)$; cleaned chains by bid-ask spread and adaptive IV-quantile filters, restricting to OTM options with $|k_{fwd}| \leq 0.35$, $IV \in [0.03, 1.5]$.
 - Computed surface analytics – skew ($\partial\sigma/\partial k$), term structure ($\partial\sigma/\partial T$), curvature ($\partial^2\sigma/\partial k^2$) – via numerical differentiation on the fitted grid.
- End-to-End Systematic Strategy** *Python, pandas, Tinkoff Invest API, quantstats*
- Designed a trend-following + volatility-targeting strategy (150-day trend filter, 18% target annualized vol, $1.2 \times$ leverage cap) on an equal-weighted basket of liquid Russian blue chips (SBER, GAZP, LKOH, TATN, VTBR, NVTK, GMKN, PLZL), with additive ex-dividend price adjustment.
 - Backtested 2020–2024 (1248 trading days), *net of a 20 bps cost per unit of turnover*: Sharpe 1.74, CAGR 25.94%, max drawdown -17.09%, annualized vol 13.82% – versus Sharpe 0.44 / max drawdown -65.93% for the buy-and-hold benchmark (quantstats).
 - Used walk-forward evaluation with an embargo window between train and test (600/63/5 days) to guard against look-ahead leakage; built an order/fill/NAV simulator to emulate paper-trading execution.

EXPERIENCE

- GYI** — Data Analyst Moscow, Russia Oct 2025 — Present
- Built financial and transaction data pipelines (collection, cleaning, structuring of large-scale datasets); analyzed payment flows to surface patterns, anomalies, and key revenue drivers.
 - Built analytical reports and dashboards supporting operational and financial decisions.

SKILLS

- **Languages:** Python, C++
- **Data & ML:** Polars, Pandas, NumPy, SciPy, Scikit-learn, PyTorch, Matplotlib
- **Quant:** Backtesting, Walk-Forward Cross-Validation, Time Series Analysis, Derivatives Pricing, Statistical Modeling