

Capability *Brief*

Quantitative Analytics · Risk Control · Algorithmic Trading Systems

Alpha & Beta
Attribution

Tail Risk Frameworks

Options & Futures
Systems

Python Automation & API
Integration

Shion Quant is a quantitative analytics and technology consulting firm serving small hedge funds, family offices, and active proprietary traders.

We bring experimental physics methodology to financial markets — applying the same statistical rigor, hypothesis testing, and systematic validation used in rare-event detection to portfolio analysis, risk control, and trading system design. Our deliverables are production-ready: rigorous models, clean code, and actionable analytics — no black boxes.

01 CORE SERVICES

01 Quantitative Portfolio Analysis

Alpha/beta decomposition, Sharpe & Sortino ratio analytics, factor exposure attribution, and benchmark-relative performance reporting across equities, options, and futures.

02 Risk Control & Hedging

Tail-risk frameworks, dynamic hedge triggers (MA crossovers, VIX regimes), protective options structuring, and drawdown limit systems for long-only and barbell portfolios.

03 Algorithmic Trading Systems

End-to-end automated strategy development: signal generation, backtesting with realistic costs, and live execution via IBKR, Alpaca, or bespoke broker APIs.

04 Options Strategy Engineering

Covered calls, protective puts, Wheel strategies, and spreads. Greeks management, GEX analysis, and systematic roll management with full automation capability.

05 Macro & Regime Monitoring

Geopolitical event modeling, Fed policy dashboards, yield curve analytics, and commodity/FX overlay signals — integrated into your existing portfolio framework.

06 Custom Research & Backtesting

Hypothesis-driven strategy research with walk-forward validation, Monte Carlo stress testing, and ML-augmented signal construction.

02 DELIVERABLES

Every engagement produces tangible, owned outputs — not reports you file away. Code is documented and handed over. Models are explained. No dependency on us to keep things running.

Monthly Risk Report

Full attribution, Greeks exposure, regime indicators, hedge effectiveness review, and forward scenario analysis.

Live Monitoring Dashboard

Real-time P&L, delta exposure, hedge status, and macro overlay signals — accessible from any device.

Event-Driven Alerts

Configurable signals for VIX spikes, MA crossovers, geopolitical triggers, and position limit breaches.

Production Automation Scripts

Documented Python systems with API integrations, unit tests, and monitoring hooks — fully handed over.

Strategy Research Memos

Hypothesis, methodology, in-sample/out-of-sample results, and implementation recommendations.

Onboarding & Training

Structured knowledge transfer — your team understands every model and parameter. No black boxes.

03 METHODOLOGY

01 Diagnostic & Discovery

Portfolio audit, risk exposure mapping, and strategy clarification. We model what you hold before we model what you could do.

02 Quantitative Modeling

Statistical analysis, signal research, factor construction — all validated out-of-sample with conservative assumptions on costs and slippage.

03 Systematic Implementation

Python-based automation, API integration, real-time monitoring dashboards. Production-grade code reviewed for latency and fault tolerance.

04 Ongoing Calibration

Regime-adaptive recalibration, live performance attribution, and systematic review cycles. Markets evolve — your systems must too.

All engagements begin with a complimentary 30-minute strategy call. Fees are transparent and fixed — no hourly billing surprises.

Diagnostic

\$2,500

One-time engagement

- Full portfolio risk audit
- Alpha / Beta / Sharpe / Sortino report
- Drawdown & tail risk analysis
- Written recommendations memo
- 60-minute debrief call

Monthly Retainer

\$4,500

Per month — cancel anytime

- Everything in Diagnostic
- Monthly risk attribution report
- Hedge monitoring & real-time alerts
- 1 production automation script / month
- Options strategy reviews
- Macro & regime monitoring dashboard
- Weekly check-in calls

Project Build

\$15,000+

Project-based, scoped per SOW

- Custom strategy research & backtesting
- Full algorithm build with live deployment
- Dashboard & monitoring infrastructure
- Team training & full handover
- 90-day post-launch support

05 WHO WE SERVE

Small Hedge Funds

Systematic strategies, API automation, risk attribution, tail-risk overlays

Family Offices

Barbell portfolios, options income, multi-account dashboards, macro monitoring

Active Prop Traders

NQ/ES futures analytics, Greeks monitoring, GEX analysis, custom execution scripts

06 ABOUT SHION QUANT

Shion Quant was founded by a physics researcher with a background in experimental particle physics and rare-event detection — fields where statistical rigor is not optional. The same discipline applied to detecting a signal in 10^{18} collisions is applied here to portfolio analysis, strategy validation, and risk modeling.

We operate as a technology and analytics consultancy — not a registered investment adviser. All deliverables are analytical tools and systems. Investment decisions remain entirely with the client.

Professional Background	Experimental Physics, Rare Event Detection, Statistical Modeling
Markets Covered	Equities, Options, NQ / ES / CL Futures, ETFs
Technology Stack	Python, NumPy, SciPy, Pandas, IBKR API, Alpaca API
Approach	Systematic · Model-Driven · Regime-Aware · Out-of-Sample Validated
Entity Type	Technology & Analytics Consulting · DBA: Shion Quant
Location	San Diego, CA · Remote engagements worldwide

Important Disclaimer

Shion Quant is a technology and analytics consultancy. Services consist of quantitative tools, models, code, and research reports. Nothing in this document or in any deliverable constitutes investment advice, a recommendation to buy or sell any security, or the rendering of investment advisory services. All investment decisions are made solely by the client. Shion Quant is not a registered investment adviser.

Ready to get started?

Every engagement begins with a complimentary 30-minute strategy call.

Email
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