QUANTSTRATUM OÜ

Trading Infrastructure & Quantitative Engineering Consultancy

Email: contact@quantstratum.com | Web: quantstratum.com | Telegram: t.me/quantstratum
Location: Pan-European (Spain & United Kingdom) | Entity: Estonian OÜ | EU Single Market Access

PROFESSIONAL SUMMARY

QuantStratum is a specialized engineering consultancy delivering trading infrastructure, quantitative systems, and high-performance software for cryptocurrency, DeFi, and traditional finance markets. Founded by six senior engineers with 100+ years of combined experience in low-latency systems, distributed computing, and financial engineering.

We build production-grade matching engines, order book systems, options analytics platforms, and cloud-native infrastructure in Rust, C++, Go, and Python. Our team has delivered systems at Capital Delta, Swissblock, Deutsche Bank, Barclays, Flowtraders, Splunk, Dell, VMware, Fujitsu, and FlexTrade. Our open-source libraries accumulate 900+ GitHub stars and are used in production trading systems worldwide.

TECHNICAL EXPERTISE

Programming Languages: Rust, C++, Go, Python, TypeScript, Bash, Solidity

Financial Protocols: FIX (Financial Information eXchange), SBE (Simple Binary Encoding), gRPC, WebSocket, REST, NATS, Kafka

Cloud & Infrastructure: AWS (EC2, EKS, IAM, VPC), GCP (GKE), Azure (AKS), Kubernetes, Docker, Terraform, Helm, ArgoCD. Physical infrastructure: datacenter design, rack & stack, cabling, power/cooling

Databases & Storage: TimescaleDB, QuestDB, PostgreSQL, ClickHouse, MongoDB, MariaDB, Redis

Observability & Monitoring: Prometheus, Grafana, Loki, Nagios, Centreon, PRTG, custom telemetry engines

Security: HashiCorp Vault, Harbor, CheckPoint, F5 ASM/LTM/GTM/APM, Cisco ASA, WAF, IAM design

CI/CD & DevOps: GitHub Actions, GitLab CI, Jenkins, ArgoCD, Velero, infrastructure-as-code

Trading Systems: Matching engines, order book systems (L2/L3), market data feeds, risk engines, margin calculators, market making algorithms (Avellaneda-Stoikov), smart order routing, latency optimization (kernel bypass, DPDK, io_uring)

Quantitative Finance: Options pricing (Black-Scholes, binomial), Greeks computation, implied volatility surfaces, strategy backtesting, portfolio optimization (VaR, CVaR, Kelly criterion), market microstructure

Blockchain & DeFi: AMM/CLMM design, concentrated liquidity optimization, on-chain options pricing, DEX infrastructure (Solana, EVM), MEV-aware execution, OTC RFQ systems

CORE COMPETENCIES

Rust Systems Programming

Production matching engines, limit order books, FIX/SBE protocol layers, low-latency data pipelines, memory-safe concurrent systems, real-time market data processing

Quantitative Finance & Algorithmic Trading

Options analytics (Greeks, IV surfaces, exotic pricing), strategy backtesting frameworks, risk engines (VaR/CVaR), market data infrastructure, systematic trading systems

Cloud & Platform Engineering

AWS/GCP/Azure multi-cloud architecture, Kubernetes orchestration (EKS/GKE/AKS), Terraform IaC, CI/CD pipeline design, GitOps, SRE practices, MLOps

Network & Physical Infrastructure

F5/Cisco/CheckPoint, datacenter design & operations, rack/stack/cabling, WAF, load balancing, telecom engineering, co-location environments

Security Engineering

Infrastructure security (firewalls, WAF, IAM), platform security-by-design, secrets management (Vault), compliance for regulated financial environments, penetration testing

DeFi & Crypto Infrastructure

AMM/CLMM optimization, on-chain options pricing, smart order routing, DEX design (Solana), MEV-aware execution, liquidity provision strategies

IT Service Delivery & Governance

SLA/KPI governance, ITIL frameworks, incident & problem management, service quality assurance, client relationship management

SERVICE AREAS

Exchange & Trading Infrastructure

Matching engine design and implementation, order book systems (L2/L3 depth), FIX/SBE protocol engineering, risk & margin engines, latency optimization (kernel bypass, DPDK, io_uring), market data feed handlers

Quantitative Systems & Analytics

Options analytics engines (Greeks, IV surfaces, exotic pricing), strategy backtesting frameworks (event-driven, walk-forward), portfolio risk systems (VaR/CVaR, Kelly criterion), market data pipelines (TimescaleDB, QuestDB)

Cloud, Platform & Network Engineering
Cloud architecture for trading (AWS/GCP/Azure), Kubernetes orchestration, CI/CD for regulated environments, network architecture for low-latency trading, observability & SRE, security infrastructure

DeFi & Crypto Infrastructure
CLMM/AMM optimization, on-chain options infrastructure, smart order routing, MEV-aware execution strategies, DEX infrastructure on Solana

Architecture Review & Advisory
System architecture audits, technology stack evaluation, C++/Java to Rust migration planning, fractional CTO services

Startup MVP & Technical Due Diligence
End-to-end MVP builds for fintech/trading startups preparing for seed or Series A: architecture, core system implementation, cloud deployment, investor-ready technical documentation

TEAM

Six founding engineers with complementary expertise spanning the full stack of trading technology, from low-latency matching engines to datacenter network design. Prior production experience at Capital Delta, Swissblock, Deutsche Bank, Barclays, Flowtraders, Splunk, Dell, VMware, Fujitsu, and FlexTrade.

José M. García Cortés — CEO & Managing Director
Alicante, Spain
12+ years IT service delivery and operations management. Service Delivery Manager at Fujitsu overseeing end-to-end IT delivery across infrastructure, cloud, networks, and DevOps. ITIL expert in incident & problem management. SLA/KPI governance specialist. Industrial Engineering degree, Universidad Miguel Hernández. Trilingual (Spanish, English, French).

Joaquin Bejar García — Head of Quantitative Engineering
Madrid, Spain
15+ years infrastructure engineering and quantitative finance. Founder of Capital Delta (systematic options trading). Author of OrderBook-rs (440+ GitHub stars), OptionStratLib (190+ stars), IronSBE, and market-maker-rs. Published researcher on SSRN (structured OTC crypto frameworks). Writing book on algorithmic options trading. Expert in Rust, matching engines, FIX/SBE protocols, options pricing, and market microstructure.

Daniel A. Gallardo Aguilar — CTO & Platform Engineering Lead
Alicante, Spain
10+ years managing distributed platform engineering teams. Hands-on Rust and Python expertise. SRE, platform security, cloud-native transformation. Backend engineer at Capital Delta building trading infrastructure connectors (REST, WebSocket, NATS, Redis) and database integrations (MongoDB, QuestDB, TimescaleDB, PostgreSQL). DevOps and CI/CD automation specialist.

Carlos Jiménez García — Principal Engineer, Systems
Guadalajara, Spain
20+ years systems software engineering. Currently at Dell EMC: Rust/C++ telemetry engines (Tokio, Actix-web), gRPC services (Tonic), data pipelines (Pandas + ClickHouse), CLI tooling for large-scale storage infrastructure. Former railway SCADA real-time control systems in C++. Strong TDD and DDD practitioner. Expert in high-throughput data processing.

Luis Soto Campos — Head of Cloud Infrastructure
London, United Kingdom
20+ years cloud and platform engineering. Current SRE at Splunk (multi-cloud SaaS). Former Senior MLOps Engineer at Bumble (GPU workloads on EKS), SRE at FlexTrade (ultra-low-latency trading systems on OpenShift), Senior Cloud Infrastructure Engineer at VMware. Deep expertise in AWS, EKS, Kubernetes, Terraform, and CI/CD pipeline design. London-based for UK and European client relationships.

Gustavo A. Martínez Bailén — Head of Network & Infrastructure
Murcia, Spain
12+ years enterprise network infrastructure in regulated environments. F5 load balancers (ASM/LTM/GTM/APM), CheckPoint and Cisco ASA firewalls, HP/Cisco/Enterasys switching, monitoring platforms (Nagios, Centreon, PRTG), datacenter management. Former telecom project manager: IP telephony (NGN) across 600+ bank branches (Bancaja). Telecommunications Engineering degree, Universidad Politécnica de Valencia.

OPEN SOURCE PORTFOLIO

70+ public repositories under MIT/Apache 2.0 licenses. Over 900 GitHub stars across trading infrastructure, quantitative finance, and DeFi projects. Key libraries:

OrderBook-rs (440+ stars) — High-performance, thread-safe limit order book and matching engine in Rust
OptionStratLib (190+ stars) — Options analytics: Greeks, IV surfaces, multi-leg strategies, pricing across asset classes
market-maker-rs (60+ stars) — Quantitative market making strategies (Avellaneda-Stoikov model)
PriceLevel (40+ stars) — Lock-free price level implementation for limit order books
Protocol & Infrastructure: IronSBE, IronFix, quant-trading-system, Option-Chain-OrderBook, market2nats, StrategyExecutionEngine
Broker Integrations: deribit-fix, deribit-websocket, ig-client, alpaca-rs, tradier, DXlink, tastytrade
DeFi & On-Chain: matchbook (Solana DEX), otc-rfq, CLMM-Liquidity-Provider, hydra-amm, DeFi-Arbitrage-Engine, ARPP, UniswapV2-VOB
Research & Simulation: OptionChain-Simulator, MarketMimic (synthetic data via GANs), py-defi-amm
Full portfolio: github.com/joaquinbejar (70+ repositories)

ENGAGEMENT MODELS

Engagement	Duration	Pricing
Architecture Audit	1–2 weeks	€8K–€15K fixed
System Implementation	2–6 months	€150–€250/hr T&M
Startup MVP Build	2–4 months	Scoped per project
Fractional CTO	3–12 months	€5K–€10K/mo retainer
Maintenance & Support	Ongoing	€3K–€8K/mo retainer

For inquiries: **contact@quantstratum.com** | **quantstratum.com** | **Telegram: t.me/quantstratum**