

Artem Garbart

Senior C++ Trading Engineer / HFT Developer

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Relocation/Remote: open



Summary

Senior C++ Engineer specializing in HFT (High-Frequency Trading) and low latency C++ systems. Proven track record in:

- Development of trading systems, execution engines, market data handlers
- C++23 (concepts, constexpr, templates), memory optimization, compile-time metaprogramming
- Exchange connectivity: FIX, SBE, REST, WebSocket (built from scratch)
- Performance optimization at nanosecond/microsecond latency levels
- Multithreading, lock-free data structures, shared memory, NUMA-aware architectures
- Linux performance profiling: perf, flamegraphs, valgrind
- Leadership: mentoring, code review, collaboration with traders and business

Skills

Programming: C++23 (concepts, constexpr, templates), Python, JavaScript

Trading Systems: market data feeds, order execution, risk checks, matching engines

Concurrency & Low Latency: lock-free structures, atomics, multi-threading, shared memory, CPU affinity, NUMA optimization

Networking & Protocols: FIX, SBE, REST, WebSocket, Boost.Asio, DPDK, kernel bypass

Performance Tools: perf, flamegraphs, valgrind

System Design: high-load distributed microservices, low latency trading engines, real-time eventdriven systems

Methodologies: Agile/Scrum, Kanban

Soft Skills: leadership, mentoring, technical interviews, cross-team communication

Experience

irg.ai (HFT)

Senior C++ Developer

(Oct 2024 – Present)

- Built and optimized ultra-low latency trading core in C++23
- Developed exchange connectivity (FIX, SBE, REST, WebSocket) from scratch
- Optimized pipelines and lock-free structures for microsecond latency
- Applied NUMA-aware memory optimizations and compile-time techniques (constexpr, templates)
- Benchmarked with Linux perf and Intel VTune under 100k+ msg/s load

VK

Senior C++ Developer

(Apr 2024 – Oct 2024)

- Embedded and streaming development with focus on real-time performance
- Optimized legacy C/ffmpeg code for low latency streaming
- Contributed to high-load reliability in multimedia systems

Yandex

Senior C++ Developer

(Apr 2021 – Apr 2024)

- Designed and developed high-load microservices (millions of RPS) in C++
- Solved latency bottlenecks in services and databases
- Maintained 100% test coverage in mission-critical components
- Provided code review, mentoring and technical leadership

Krastsvetmet

Middle C++ Developer

(Mar 2020 – Apr 2021)

- Built real-time event-driven systems for production synchronization
- Designed fault-tolerant microservice architectures (factory-level critical)
- Performed performance optimization of both new and legacy code

Autonomous Aerospace Systems

Junior C++ Developer

(Jan 2018 – Mar 2020)

- Developed real-time UAV control systems under QNX
- Designed telemetry analysis platforms and autopilot software
- Built low-level communication subsystems, experience with real-time OS and fault tolerance

Education

Siberian Federal University — B.Sc. Computer Software Engineering (2017 – 2021)

Keywords

C++17, C++20, C++23, Python, TCP/IP, PostgreSQL, High-Frequency Trading, HFT, Trading Systems, Execution Engines, Market Data, FIX, SBE, REST, WebSocket, Low Latency, High Performance, Multithreading, Lock-free, Shared Memory, NUMA, DPDK, Kernel Bypass, perf, Flamegraphs, Profiling, Optimization, Risk Management, Matching Engine, High Load, Real-time Systems