Joakim Ferngren

C++ Developer

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SUMMARY

C++ developer with 6 years writing C++17 and C++20 on Linux for market-data and engineering software. Rewrote a feed handler that cut median tick-to-publish latency from 38 to 9 microseconds, and moved a 1.2-million-line CAD codebase to CMake and C++17. Comfortable with profilers, sanitizers and on-call for systems that cannot pause.

EXPERIENCE

C++ Developer — Lakeshore Quant Systems

Chicago, IL · Mar 2022 – Present

- Rewrote the equities feed handler in C++20 with a lock-free ring buffer, cutting median tick-to-publish latency from 38 to 9 microseconds across 14 exchange feeds.
- Removed heap allocations from the order-book update path using arena allocators, cutting p99 latency spikes by 70% during market open.
- Added ThreadSanitizer and AddressSanitizer builds to CI, finding 11 data races and 4 use-after-free bugs before they reached production.
- Built a replay tool that re-runs 6 hours of captured market data in 20 minutes, now used by 9 developers to reproduce incidents.

Software Developer (C++) — Corvane Design Software

Milwaukee, WI · Jun 2019 – Feb 2022

- Migrated a 1.2-million-line CAD codebase from hand-written makefiles to CMake, cutting clean build time from 52 to 17 minutes with ccache.
- Parallelized mesh tessellation with std::thread and a work-stealing queue, cutting load time for large assemblies from 40 to 11 seconds.
- Replaced raw pointers with std::unique_ptr in 3 core modules, cutting crash reports linked to those modules by 60% over two releases.

SKILLS

Languages: C++17/20, C, Python (tooling), Bash

Libraries: STL, Boost.Asio, Abseil, GoogleTest, Google Benchmark

Tooling: CMake, Conan, gdb, perf, Valgrind, ASan/TSan, clang-tidy

Systems: Linux, TCP/UDP multicast, lock-free queues, SIMD (AVX2)

EDUCATION

B.S. Computer Engineering, University of Illinois Urbana-Champaign, 2019

Fictional example by FindAJobAI: the person, employers and numbers are invented.