

# Nhut Nguyen, Ph.D.

Senior C++ Software Engineer  
Low-Latency Trading Systems



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## PROFILE

Senior C++ software engineer with 3+ years of experience building performance-critical, low-latency systems for real-time trading environments. Deep expertise in multithreading, memory management, and microsecond-level optimization in production systems with strict correctness and timing constraints. Proven track record collaborating with traders and quants to deliver scalable, production-ready trading infrastructure. Eager to master Rust and contribute to cutting-edge algorithmic trading systems.

## WORK EXPERIENCE

DEC 2022 – PRESENT (3 yrs)

*Alipes ApS (Denmark)*

### Research Infrastructure Engineer

Building high-performance C++ systems for real-time trading and quantitative research:

- Designed and implemented low-latency C++ infrastructure supporting live trading and prediction workloads with microsecond-level latency budgets.
- Optimized critical execution paths for deterministic performance through careful memory layout, threading models, and data structure selection.
- Collaborated daily with quants and traders to translate quantitative models into production-ready, scalable C++ components.
- Took full ownership of core trading infrastructure components, debugging and resolving issues under real production trading pressure.
- Analyzed live system behavior using advanced profiling tools and iterated rapidly based on production feedback.
- Contributed reusable libraries deployed across research, simulation, and live trading environments.
- Improved system reliability and reduced latency variability through systematic performance optimization.

**Key Achievement:** Delivered microsecond-level latency improvements in critical trading paths while maintaining system stability and correctness under production load.

DEC 2021 – NOV 2022 (1 yr)

*CLAAS E-Systems Denmark*  
C++ Software Developer

- Modernized legacy C++ codebases for new embedded platform.
- Focused on performance, determinism, and reliability on Linux-based systems.
- Strengthened expertise in low-level OS behavior, threading primitives, and hardware interaction.

AUG 2018 – SEP 2021 (3 yrs 1 mo)

*Synopsys Denmark ApS*

### Senior R&D Engineer

- Optimized large-scale C++ computation engines in production EDA workflows
- Delivered 2x performance improvements through algorithmic and systems-level optimization
- Improved component stability to 95%+ reliability under demanding workloads

FEB 2016 – JULY 2018 (2 yrs 6 mos)

*Teklatech A/S (Denmark)*

### Software Development Engineer

- Developed and optimized numerical models for complex power delivery networks
- Emphasized correctness, performance, and scalability in computation-intensive systems

## TECHNICAL SKILLS

PROGRAMMING LANGUAGES	C++20/23, Python eager to master Rust
SYSTEMS & TOOLS	Linux, Docker VS Code, Rider Git, GitHub, GitLab, CMake
CI/CD	Jenkins, TeamCity
DEVELOPMENT PRACTICES	Agile, code reviews ownership-driven development Performance benchmarking

## EDUCATION

2012 – 2015	<b>Ph.D. in Math &amp; Computer Science</b> <i>Technical University of Denmark</i>
2005 – 2009	<b>M.Sc. in Algebra &amp; Number Theory</b> <i>Vietnam National University HCM</i>
2000 – 2004	<b>B.Sc. in Math &amp; Computer Science</b> <i>Vietnam National University HCM</i>

## LANGUAGES

ENGLISH	Fluent
DANISH	Limited working proficiency
VIETNAMESE	Native