

# Nhut Nguyen, Ph.D.

Quantitative Software Engineer / Research Engineer  
High-performance systems, Mathematical modeling,  
Low-latency computation



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## WORK EXPERIENCE

DEC 2022 – PRESENT (3 YRS)

*Alipes ApS (Denmark)*

### Research Infrastructure Engineer

- Designed and implemented performance-critical C++ research infrastructure supporting quantitative trading models.
- Translated mathematical and statistical models into optimized production code used in live trading.
- Optimized latency-sensitive paths to microsecond-level execution, using modern C++ (C++20/23), lock-free techniques, and careful memory layout.
- Built and maintained multithreaded and GPU-accelerated (CUDA) components for large-scale experimentation and back-testing.
- Partnered closely with quant researchers to validate models, improve numerical stability, and accelerate experimentation.
- Developed internal libraries, benchmarks, and profiling tools to ensure reproducibility and performance regression control.

DEC 2021 – NOV 2022 (1 YR)

*CLAAS E-Systems Denmark*

### C++ Software Developer

- Developed and modernized embedded C++ systems with strict performance and reliability constraints.
- Worked close to hardware, improving system-level understanding of latency and resource usage.

AUG 2018 – SEP 2021 (3 YRS 1 MO)

*Synopsys Denmark ApS*

### Senior R&D Engineer

- Developed algorithms and data structures for timing optimization of next-generation semiconductor designs.
- Improved robustness of optimization engines to 95% success rate and achieved 2x performance gains.
- Worked on large-scale C++ systems requiring high correctness and algorithmic efficiency.

FEB 2016 – JULY 2018 (2 YRS 6 MOS)

*Teklatech A/S (Denmark)*

### Software Development Engineer

- Modeled the Power Delivery Network with all complex connections.

AUG 2012 – DEC 2015 (3 YRS 5 MOS)

*Technical University of Denmark*

### Employed Ph.D. Student

- Research in Algebraic Geometry, Number Theory, and Error-Correcting Codes.
- Constructed asymptotically good codes using Drinfeld modular curves.
- Strong foundation in abstraction, proofs, and translating theory into explicit constructions.

JAN 2005 – JUL 2012 (7 YRS 7 MOS)

*Vietnam National University HCM – School of Science*

### Lecturer

- Designed and gave lectures on Algebra Computer Systems, Cryptography, Coding Theory, Arithmetics.

## SOFTWARE DEVELOPMENT SKILLS

CORE SKILLS	High-performance C++ (C++20/23) Algorithmic optimization Low-latency systems Performance optimization Profiling, benchmarking Multithreading, lock-free programming
LANGUAGES	C++20/23, Python
TOOLS	VS Code, Git, CMake, Linux CI/CD, GitHub, GitLab, Docker

## 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>

## INTERESTS

WRITING	Books, Blogs, Social Posts
SPORTS	Football, Badminton, Swimming

## LANGUAGES

ENGLISH	Fluent
VIETNAMESE	Native