

Nhut Nguyen, Ph.D.

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



nhut@nhutnguyen.com



<https://github.com/ntnhus>



<https://www.linkedin.com/in/ntnhus>

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

Ph.D. in Math & Computer Science
Technical University of Denmark

2005 – 2009

M.Sc. in Algebra & Number Theory
Vietnam National University HCM

2000 – 2004

B.Sc. in Math & Computer Science
Vietnam National University HCM

INTERESTS

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

LANGUAGES

ENGLISH	Fluent
VIETNAMESE	Native