Naufal Hartono

Computer Science Undergraduate

in Naufal Hartono ✉ naufalhartono@ieee.org github.com/naufalhart

Education

Mar. 2026 – Jul. 2026 **Semester Exchange** in Informatics and Mathematics — OTH Regensburg, Germany
Course taken: Quantum Computing, Linear Algebra, Calculus II, Cryptography

Oct. 2024 – Present **B.Sc.** in Computer Science (CGPA: 3.740) — Universiti Putra Malaysia, Malaysia

Research Interest

Quantum computing, quantum information theory, theoretical computer science

Publications

Independent Publish

1. **N. Hartono**, "What does Quantum Entanglement do to Quantum Computing," Jul. 2026, Available: https://doi.org/10.5281/zenodo.21202071
2. **N. Hartono**, *Telecommunication and Network Technology*. 2026. Available: https://doi.org/10.5281/zenodo.21202180

Research Experience

Jul. 2026 (Independent Research) Investigation of Bell State Fidelity using IBM Quantum Hardware

Executed quantum circuit simulations across configurations for 1024, 4096 and 8192 shots on both standard simulators and fake backend to benchmarks state fidelity against real quantum hardware. Authored a comprehensive article in LaTeX applying rigorous academic formatting (IMRaD structure) to present experimental data.

Teaching Experience

Jan. 2026 (Volunteer) CCS3200 Discrete Structure Tutorial

Conducted an intensive final exam review session for freshman students, breaking down complex theoretical topics including mathematical induction proofs, state diagrams, and graph theory.

Honors

Sep. 2025 Dean's List award, 2nd Semester - Faculty of Computer Science and Information Technology, Universiti Putra Malaysia

Mar. 2026 Dean's List award, 3rd Semester - Faculty of Computer Science and Information Technology, Universiti Putra Malaysia

Membership

Jun. 2025 - Present Undergraduate Member, IEEE Computer Society

Technical Skills

Programming: Java, Python
Quantum Computing: Qiskit
Scientific computing: MATLAB
Development tools: Git, LaTeX

[0]Last update 5 Jul. 2026