Donald Kong

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Education

National University of Singapore — Singapore
Bachelor of Computing (Honours) in Computer Science, Second Major in Statistics — *Aug. 2024 – 2029 (expected)*
Master of Science by Research in Computer Science (planned) — *2029 (expected)*

- GPA: 4.63 / 5.0
- Focus area: Algorithms and Theory
- NUS–Télécom Paris French Double Degree Programme: NUS 2024–26, Télécom Paris 2026–28, NUS 2028–29
- Relevant CS coursework: CS3231 Theory of Computation, CS3230 Design and Analysis of Algorithms, CS2040S Data Structures and Algorithms, CS1231S Discrete Structures, CS1101S Programming Methodology
- Relevant Statistics coursework: ST4234 Bayesian Statistics, ST4238 Stochastic Processes II, ST3236 Stochastic Processes I

Télécom Paris — Palaiseau, France
Diplôme d'Ingénieur (French Double Degree Programme) — *Sep. 2026 – Aug. 2028*

- First-year engineering core, taught in French; coursework includes Probability, Functional and Fourier Analysis, and Compilers

NUS High School of Mathematics and Science — Singapore
NUS High School Diploma (High Distinction), Majors in Mathematics and Computer Science — *Jan. 2016 – Dec. 2021*

- Additional majors in Chemistry and Physics
- Australian Informatics Olympiad Bronze Medallist (2019)

Experience

Researcher (Intern) — May 2026 – Aug. 2026
DSO National Laboratories — *Singapore*

- Analysed the decryption failure rate of ML-KEM (Kyber), the NIST post-quantum KEM standard; reproduced the official figures
- Derived explicit estimates and provable bounds via Chernoff and saddlepoint methods, validated against exact computation
- Presented the findings in a five-chapter research report and a 45-minute talk

Teaching Assistant, CS2040S Data Structures and Algorithms — Jan. 2026 – May 2026
National University of Singapore — *Singapore*

- Led weekly tutorial sessions, ran consultations, and graded assessments for the data structures and algorithms module

Teaching Assistant, CS1101S Programming Methodology — Aug. 2025 – Dec. 2025
National University of Singapore — *Singapore*

- Led studio sessions on functional programming (SICP-style curriculum in Source) and graded weekly assessments

Combat Engineer (Armoured) — Jan. 2022 – Nov. 2023
42 Singapore Armoured Regiment, Singapore Armed Forces — *Singapore*

- Completed mandatory full-time national service as a Combat Engineer (Armoured) with 42 SAR

AI Scientist (Intern) — Sep. 2021 – Dec. 2021
Pensees Systems — *Singapore*

- Designed and evaluated deep learning models for face recognition, face detection, and emotion recognition
- Contributed to model improvements and deployment in production computer vision pipelines

Student Researcher — Jun. 2019 – Feb. 2020
Singapore University of Technology and Design — *Singapore*

- Algorithmic analysis of b-Bit Minwise Hashing; characterised estimator bias as a function of set similarity, cardinality, and comparison bits
- Proposed an error-term correction to the similarity estimator with negligible runtime and memory overhead

Technical Skills

Languages: Python, C++, Java, TypeScript, R, SQL (Postgres)
Tools: Git, LaTeX, Linux, Vim, VS Code, IntelliJ
Libraries: pandas, NumPy, scikit-learn, Matplotlib
Spoken Languages: English, Mandarin, Cantonese (all native); French (B1, DELF)