

Mingyu Lee

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EDUCATION

Seoul National University

B.Sc. in Computer science and Engineering, Double major in Mathematical Sciences
GPA: 4.05/4.30, Major GPA: 4.05/4.30

Seoul, Korea

Mar 2021 –

Gyeonggi Science High School For The Gifted

Computer Science

Suwon, Korea

Mar 2018 – Feb 2021

RESEARCH EXPERIENCE

Research Institute of Mathematics, Seoul National University.

Undergraduate Researcher

Seoul, Korea

Jul 2022 – Present

- Explored applications and advancements of quantum machine learning, incorporating ideas from classical neural networks to improve existing methods or explore novel approaches.

WORK EXPERIENCE

Republic of Korea Air Force

Mandatory Military Service

Pyeongtaek-si, Gyeonggi-do, Korea

Feb 2024 – Nov 2025

NCSoft

Research Intern

Seongnam-si, Gyeonggi-do, Korea

Jul 2023 – Aug 2023

- Developing AI based Exchange Traded Fund(ETF) managing system

Seoul National University

Teaching Assistant

Seoul, Korea

Mar 2022 – Jun 2022

- Teaching assistant(TA) for discrete mathematics

Rainbow Brain, Inc.

Internship

Seoul, Korea

Jan 2022 – Mar 2022

- Collecting e-commerce data and providing data analysis

AWARDS & ACHIEVEMENTS

2025 ICPC Seoul Regional

Bronze prize (8th place). President's Award of the National Information Society Agency (NIA)

Nov 2025

2023 ICPC Seoul Regional

Encouragement prize (14th place). Director's award of the National Information Society Agency (NIA)

Nov 2023

2023 UCPC final round

7th place.

Jul 2023

2023 Quantum Hackathon Korea

1st place. Recipient of the Ministry of Science and ICT Minister's Award.

Jun 2023

WorldQuant Brain research consultant

Apr 2023

QHack certificate of achievement (advanced)

Feb 2023

Xanadu QHack Coding Challenges

Power-Up Awards, IBM Quantum/PINQ2 and NVIDIA/Cyrtara/Run :AI

Feb 2023

Samsung Collegiate Programming Cup (SCPC): 5th prize

Sep 2022

Samsung Humantech Paper Award

Bronze prize. "Improving Performance of Pyramid CNN used in Image Deblurring (2020)"

Jul 2021

HONORS

Korea–U.S. Advanced Industries Youth Exchange Scholarship, 4th Cohort	Nov 2025 –
Seoul National University Semiconductor Characterization College Scholarship	Feb 2024 –
Young Engineers Honor Society (YEHS) <i>The National Academy of Engineering of Korea</i>	Nov 2023 –
Samsung Software Membership	Oct 2022 –
The Presidential Science Scholarship(Computer Science)	Mar 2022 –

PAPERS

- M.Lee**, M.Shin, J.Lee, K.Jeong, “Mutual information maximizing quantum generative adversarial networks”, *Nature Scientific Reports* **15.1**, 32835 (2025).
- M.Shin, S.Lee, J.Lee, **M.Lee**, D.Ji, H.Yeo, K.Jeong,
“Disentangling quantum neural networks for unified estimation of quantum entropies and distance measures”, *Physical Review A* **110**, 062418 (2024).
- Mingyu Lee**, “Improving Performance of Pyramid CNN used in Image Deblurring”, (2020)

CONTRIBUTED TALKS [†]denotes the speaker.

- Mingyu Lee[†]**, “Mutual Information Maximizing Quantum Generative Adversarial Network and Its Applications”. 2nd CQNC Winter Kick-off Workshop. (Dec 2023)
- Mingyu Lee[†]**, Myeongjin Shin, Junseo Lee and Kabgyun Jeong, ”Mutual Information Maximizing Quantum Generative Adversarial Network and Its Applications”, KSIAM 2023 Annual Meeting. (Nov 2023)
- Sungmin Jang[†], Geumil Bae **Mingyu Lee**, ”Proposing a Transformer-based ETF portfolio for liquidity providers”, Korean Institute of Industrial Engineers Autumn Annual Conference (Nov 2023)
- Mingyu Lee[†]**, “Introduction to Shadow Tomography and Its Application”. 1st CQNC Winter Kick-off Workshop. (Jan 2023)

INVITED TALKS

- Mingyu Lee[†]**, Myeongjin Shin, Junseo Lee and Kabgyun Jeong, ”Mutual Information Maximizing Quantum Generative Adversarial Network and Its Applications in Finance”, Quantum FinTech Webinars Series, Rethinc. Labs, Frank Hawkins Kenan Institute of Private Enterprise, The University of North Carolina at Chapel Hill, UNC Kenan-Flagler Business School, USA. (Nov 2023)

POSTER PRESENTATION

- Mingyu Lee[†]**, Myeongjin Shin, Junseo Lee and Kabgyun Jeong, ”Mutual Information Maximizing Quantum Generative Adversarial Network and Its Applications”, 27th Annual Conference on Quantum Information Processing (QIP 2024), Taipei International Convention Center (TICC), Taipei (2024)

SKILLS AND QUALIFICATIONS

Programming languages & Tools

Advanced skills: C/C++, Python

Basic skills: MATLAB, Pytorch, Qiskit, PennyLane, Java/Typescript, JAVA, R, React

Algorithms and problem solving skills

Codeforces | rating 2177 (Master), max rating 2279 (Master), [red1108](#)

Atcoder | rating 1915 (1 Kyu), max rating 1929 (1 Kyu), [red1108](#)

INTERESTS

- Quantum computation and Quantum Information.
- Quantitative research and trading.
- Machine learning and it's applications.

Last updated: Jan, 2025.