Hajin Jeon

Ph.D. in Electrical Engineering and Computer Science · Senior Researcher, LG H&H

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EXPERIENCE

2025.03 – Present — **Senior Researcher** — Seoul, Korea

LG H&H

- Conducted diverse multi-omics data analyses and bioinformatics research.

2023.04 – 2025.02 — **Postdoctoral Researcher** — Daejeon, Korea

Korea Bioinformation Center (KOBIC), Korea Research Institute of Bioscience and Biotechnology (KRIBB)

- Conducted colorectal cancer genomic variant & recurrence analysis and lung cancer metastatic prognostic analysis.
- Designed and built biological data management and analysis databases.

2023.02 – 2023.03 — **Engineer** — Daejeon, Korea

GraphAI

- Conducted blockchain-based data sharing research and system prototyping (related to KR Patent 10-2515367).

EDUCATION

2018.03 – 2023.02 — **Daegu Gyeongbuk Institute of Science and Technology (DGIST)** — Daegu, Korea

Ph.D. in Electrical Engineering and Computer Science (Information and Communication Engineering), InfoLab

Dissertation: *A Method for Rapid Design of High-quality Primers for PCR Experiments*

Advisor: Min-Soo Kim (KAIST)

2014.03 – 2018.02 — **Hanyang University** — Seoul, Korea

B.S. in Computer Science and Engineering

PUBLICATIONS

Journal Articles (SCIE)

1. **Hajin Jeon**, Jong Lyul Lee, Hyeran Shim, Soobok Joe, Iksu Byeon, Chan Wook Kim, Seok-Byung Lim, In Ja Park, Yong Sik Yoon, Hoang Bao Khanh Chu, Young-Joon Kim, Chang Sik Yu, Jin Ok Yang, "Genetic variations and recurrence in stage III Korean colorectal cancer: Insights from tumor-only mutation analysis," *PLOS ONE*, Vol. 20, No. 5, e0323302, May 2025. DOI: 10.1371/journal.pone.0323302
2. **Hajin Jeon**, Jeongmin Bae, Hyerin Kim, Min-Soo Kim, "VPrimer: A Method of Designing and Updating Primer and Probe With High Variant Coverage for RNA Virus Detection," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, Vol. 20, No. 1, pp. 775–784, Jan.–Feb. 2023. DOI: 10.1109/TCBB.2021.3138145
3. Jeongmin Bae, **Hajin Jeon**, Min-Soo Kim, "GPrimer: a fast GPU-based pipeline for primer design for qPCR experiments," *BMC Bioinformatics*, Vol. 22, Article 220, Apr. 2021. DOI: 10.1186/s12859-021-04133-4
4. **Hajin Jeon**, Jeongmin Bae, Sang-Hyun Hwang, Kyu-Young Whang, Hyun-Seob Lee, Hyerin Kim, Min-Soo Kim, "MRPrimerW2: an enhanced tool for rapid design of valid high-quality primers with multiple search modes for qPCR experiments," *Nucleic Acids Research*, Vol. 47, Issue W1, pp. W614–W622, Jul. 2019. DOI: 10.1093/nar/gkz323

Conference Proceedings

1. **Hajin Jeon**, Jeongmin Bae, Min-Soo Kim, "A Web-based Method for Designing and Validating Primer-probe Sets for SARS-CoV-2," *2021 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, pp. 1339–1342, Houston, TX, USA, Dec. 2021. DOI: 10.1109/BIBM52615.2021.9669619

Preprints

1. **Hajin Jeon**, Hyung-Jin Yoon, Jemin Lee, Min-Soo Kim, "Decentralized Medical Data Sharing with Off-chain Storage and View-based Access Control," *arXiv preprint* arXiv:2610.34279, Oct. 2026. DOI: 10.48550/ARXIV.2610.34279

PATENTS

1. **Hajin Jeon**, Min-Soo Kim, Inju Na, "Blockchain-Based Data Sharing Method," KR Registration No. 10-2515367 (Registered Mar. 24, 2023).

RESEARCH INTERESTS

Bioinformatics	Primer & probe design (sequence-specific design), Genomics & Omics data analysis
Computer Science	Database & pipeline design and implementation, Web programming, Blockchain

SKILLS & CERTIFICATIONS

Programming Languages	• **Systems & Pipelines:** C, C++, Python, Go, C# • **Data Analysis:** C++, Python, R • **Web:** Go, JavaScript, PHP • Quick to adopt additional languages as needed.
Bioinformatics	• Whole-Exome Sequencing (WES) analysis • Whole-Genome Sequencing (WGS) analysis • Cancer genome analysis • GWAS analysis • Transcriptomics analysis • Epigenetics analysis • ...and various other analytical methods
Certifications	• **Engineer Information Security** (2025, National Technical Qualification, Republic of Korea) • **Engineer Information Processing** (2017, National Technical Qualification, Republic of Korea)
Languages	• **Korean:** Native • **English:** Proficient in research and daily contexts • **Japanese:** Reading and listening comprehension • **Arabic:** Basic script and elementary reading