Dohoon Lee

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EDUCATION

Sep. 2017 ~ Present	**Bioinformatics Institute, Seoul National University** *Postdoctoral Fellow*	Seoul, Korea
Sep. 2017 ~ Aug. 2021	**Seoul National University** Interdisciplinary Program in Bioinformatics *PhD* *Advisor: Prof. Sun Kim* *Thesis: Multi-omics driven computational modeling of the intrinsic heterogeneity of DNA methylation and its clinical application*	Seoul, Korea
Mar. 2013 ~ Aug. 2017	**Seoul National University** School of Biological Sciences *B.S., Major: Biological Sciences, Minor: Computer Science and Engineering* *Honors: summa cum laude (GPA 4.21/4.3)*	Seoul, Korea

RESEARCH INTEREST

- **Computational Biology/Epigenomics**
  - ✓ Inferring subclonal structure of cancer using next-generation sequencing data
  - ✓ Multi-omics integrative and genome-wide computational analysis of epigenomes

- **Artificial Intelligence in Bioinformatics**
  - ✓ AI-based modeling of epigenomes

- **Reproducibility in Bioinformatics Research**
  - ✓ Establishing reproducible and reusable bioinformatic pipelines

PUBLICATIONS

1. S. Park*, **D. Lee***, Y. Kim, S. Lim, H. Chae, S. Kim (2022). BioVLAB-Cancer-Pharmacogenomics: tumor heterogeneity and pharmacogenomics analysis of multi-omics data from tumor on the cloud. Bioinformatics.

2. **D. Lee**, J. Yang, S. Kim (2021). Learning the histone codes of gene regulation with large genomic windows and three-dimensional chromatin interactions using transformer. bioRxiv.

3. **D. Lee**, S. Kim (2021). Knowledge-guided artificial intelligence technologies for decoding complex multiomics interactions in cells. Clinical and experimental pediatrics.

4. K. Jo, I. Sung, **D. Lee**, H. Jang, S. Kim (2021). Inferring transcriptomic cell states and transitions only from time series transcriptome data. Scientific reports.

5. **D. Lee***, Y, Park*, S. Kim (2020). Towards multi-omics characterization of tumor heterogeneity: a comprehensive review of statistical and machine learning approaches, Briefings in Bioinformatics.

6. M. Kang, S. Lee, **D. Lee**, S. Kim (2020). Learning Cell-Type-Specific Gene Regulation Mechanisms by Multi-

Attention Based Deep Learning with Regulatory Latent Space. Frontiers in Genetics.

7. M. Oh, S. Park, S. Lee, **D. Lee**, S. Lim, D. Jeong, K. Jo, I. Jung, S. Kim (2020). DRIM: A web-based system for investigating drug response at the molecular level by condition-specific multi-omics data integration. Frontiers in Genetics.

8. **D. Lee**, S. Lee, S. Kim (2019). PRISM: methylation pattern-based, reference-free inference of subclonal makeup, Bioinformatics.

CONFERENCES

1. **D. Lee**, S. Lee, S. Kim (2019), "PRISM: methylation pattern-based, reference-free inference of subclonal makeup", ISMB/ECCB 2019, Basel, Switzerland – *Oral presentation (Proceedings presentation).*

2. **D. Lee**, S. Lee, S. Kim (2019), "PRISM: methylation pattern-based, reference-free inference of subclonal makeup", BIOINFO 2019, Seoul, Korea – *Oral presentation (Award lecture session).*

3. **D. Lee**, S. Lee, S. Kim (2019), "PRISM: methylation pattern-based, reference-free inference of subclonal makeup", The Second Korea-Japan Machine Learning Workshop, Jeju, Korea – *Poster presentation.*

RESEARCH EXPERIENCES

- **Research Intern** at *School of Biological Sciences, Seoul National University*   Sep. 2015 ~ Dec. 2016
  - ✓ Gut metagenome-based Type 2 diabetes prediction model using machine learning techniques

AWARDS AND HONORS

2020	Youlchon AI for All fellowship, Youlchon Foundation, Korea
2019	Outstanding Paper Award, BIOINFO 2019, Seoul, Korea
2019	Merit Award: *Bronze prize*, 45th Annual Meeting of Korean Cancer Association and 5th International Cancer Conference, Seoul, Korea
2017	Graduation with honors: *summa cum laude*, Seoul National University, Korea
2015 ~ 2016	KEF Domestic Scholarship, Kwanjeong Educational Foundation, Korea