

Jueon Park

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EDUCATION

Mar. 2016 ~ Aug. 2022	Yonsei University Department of Biotechnology <i>B.S. in Biotechnology</i> GPA: 3.85 / 4.3	Seoul, Korea
Mar. 2023 ~ Present	Korea University Department of Computer Science and Engineering <i>Advisor: Jaewoo Kang</i> <i>Ph.D. Student</i> GPA: 4.37 / 4.5	Seoul, Korea

RESEARCH INTERESTS

- AI-Driven Drug Discovery
- Computational toxicology
- Toxicity Prediction via LLM
- Molecule Representation
- Molecule Generation

RESEARCH EXPERIENCES

- Research Student at Big data scientist training team (host: Prof. Jaewoo Kang), Industry-Academia Collaboration Foundation, Korea Univ., Korea (Sep. 2022 ~ Feb. 2023) / Conducted data analysis and machine learning for drug discovery
- Researcher at SKpucore, Korea (Sep. 2023 ~ Present) / SMARTUS AI System Maintenance - Prediction for Material Properties

PUBLICATIONS (SCIE/ESCI)

1. Mogan Gim¹, **Jueon Park**¹, Soyon Park, Sanghoon Lee, Seungheun Baek, Junhyun Lee, Ngoc-Quang Nguyen, Jaewoo Kang, "MolPLA: A Molecular Pretraining Framework for Learning Cores, R-Groups and their Linker Joints", *BIOINFORMATICS*, (2024)
2. Mogan Gim¹, Junseok Choe, Seungheun Baek, **Jueon Park**, Chaeun Lee, Minjae Ju, Sumin

Lee, Jaewoo Kang, "ArkDTA: attention regularization guided by non-covalent interactions for explainable drug-target binding affinity prediction", *BIOINFORMATICS*, (2023)

AWARDS AND HONORS

- 1st place in BioASQ 13B Challenge(2025), BioASQ, Greece (Sep. 2025)

CERTIFICATE

- 2025 Toxicology Specialized Training Program - Organized by the Korean Society of Toxicology (KSOT) and the Korean Environmental Mutagen Society (KEMS), South Korea Completed on August 22, 2025
- SKT FLY AI Challenger 1st Cohort, June-September, 2022, Team Leader (Passionate Group 2), Excellence Award Winner

PATENTS

1. Mogan Gim, Junseok Choe, Seungheun Baek, **Jueon Park**, Chaeun Lee, Minjae Ju, Sumin Lee, Jaewoo Kang, "METHOD AND APPARATUS FOR BINDING AFFINITY PREDICTION BASED ON NON-COVALENT INTERACTION", KR-Registration No. 10-2617957-0000

PROJECTS

- Proteomics-based Biomarker Discovery for Cancer Using Mass Spectrometry Data, Korea Health Industry Development Institute, Korea (Nov. 2024 ~ Present)
- LLM based Toxicity Prediction(CoTox), Korea Univ. DMIS Lab., Korea / First Author (Oct. 2024 ~ Aug. 2025)
- Molecule Representation Project(MolPLA), Korea Univ. DMIS Lab., Korea / Co-First Author (Aug. 2023 ~ Jan. 2024)
- Hand-written Molecule Images detection, Korea Univ. Course of Computer Vision, Korea / "Easy use for Chemist to design their novel molecules via hand writing " (Oct. 2023 ~ Nov. 2023)
- DTI Project(ArkDTA), Korea Univ. DMIS Lab., Korea / Quantity Analysis, Quality Analysis (Sep. 2022 ~ Jan. 2023)

CONFERENCES

1. **Jueon Park**, Yein Park, Minju Song, Soyoon Park, Donghyeon Lee, Seungheun Baek, Jaewoo Kang, "CoTox: Chain-of-Thought-Based Molecular Toxicity Reasoning and Prediction", IEEE BIBM 2025, Wuhan, China (Dec. 2025) - Oral
2. Seungheun Baek, Soyoon Park, Yan Ting Chok, Junhyun Lee, **Jueon Park**, Mogan Gim, Jaewoo Kang, "CRADLE-VAE: Enhancing Single-Cell Gene Perturbation Modeling with Counterfactual Reasoning-based Artifact Disentanglement", AAAI, (2025)
3. Mogan Gim, **Jueon Park**, Soyoon Park, Sanghoon Lee, Seungheun Baek, Junhyun Lee, Ngoc-Quang Nguyen, Jaewoo Kang, "MolPLA: A Molecular Pretraining Framework for Learning Cores, R-Groups and their Linker Joints", ISMB2024, Montreal, Canada (Jul. 2024)
4. Mogan Gim, Junseok Choe, Seungheun Baek, **Jueon Park**, Chaeun Lee, Minjae Ju, Sumin Lee, Jaewoo Kang, "ArkDTA: attention regularization guided by non-covalent interactions for explainable drug-target binding affinity prediction", "ISMB2023", Lyon, France (Jul. 2023)