

# Jisung Hwang

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Ph.D. Student • KAIST Visual AI Group • School of Computing

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## EDUCATION

Mar. 2026 ~ Present	<b>KAIST Visual AI Lab</b> <i>Candidate for Ph.D.</i> Supervisor: Minhyuk Sung • KAIST School of Computing	<i>Daejeon, Republic of Korea</i>
Mar. 2024 ~ Feb. 2026	<b>KAIST Visual AI Lab</b> <i>M.S.</i> Supervisor: Minhyuk Sung • KAIST School of Computing	<i>Daejeon, Republic of Korea</i> GPA : 3.94/4.3
Feb. 2020 ~ Feb. 2024	<b>KAIST</b> <i>B.S.</i> Major: Computer Science (Double: Mathematical Science) Honors: KAIST Scholarship; National Science & Technology Scholarship due to Academic Excellence	<i>Daejeon, Republic of Korea</i> GPA : 3.87/4.3
Mar. 2017 ~ Feb. 2020	<b>Gyeongbuk Science High School</b> Honors: Gyeongsangbuk-do Special Scholarship; IT Education Support Conference Scholarship	<i>Pohang, Republic of Korea</i>

## AWARDS

2026	<b>Best Master Thesis Award from KAIST CS Department</b> <i>Master Thesis: 'White Gaussian Noise Constraints'</i>
2025	<b>Best Master's Paper Award at KCGS 2025</b> <i>By the paper 'Occupancy-Based Dual Contouring'</i>
2021	<b>Korean National Undergraduate Math Competition</b> <i>Bronze Award</i>
2018, 2019	<b>Korean Olympiad in Informatics</b> <i>Software Sector: Silver Award (2018); Algorithm Sector: Bronze Award (2019)</i>

## PUBLICATIONS

2026	<b>Gradient Preconditioning for Efficient and Reliable Reward-Guided Generation</b> Jisung Hwang and Minhyuk Sung <span>ICML 2026</span>
2026	<b>PairFlow: Closed-Form Source-Target Coupling for Few-Step Generation in Discrete Flow Models</b> Mingue Park*, Jisung Hwang*, Seungwoo Yoo*, Kyeongmin Yeo, and Minhyuk Sung (*equal contribution) <span>ICLR 2026</span>
2025	<b>Moment- and Power-Spectrum-Based Gaussianity Regularization for Text-to-Image Models</b> Jisung Hwang, Jaihoon Kim, and Minhyuk Sung <span>NeurIPS 2025</span>
2025	<b>Inference-Time Scaling for Flow Models via Stochastic Generation and Rollover Budget Forcing</b> Jaihoon Kim*, Taehoon Yoon*, Jisung Hwang*, and Minhyuk Sung (*equal contribution) <span>NeurIPS 2025</span>
2025	<b>Neural Green's Functions for Solving Poisson's Equation</b> Seungwoo Yoo, Kyeongmin Yeo, Jisung Hwang, and Minhyuk Sung <span>NeurIPS 2025</span>
2024	<b>Occupancy-Based Dual Contouring</b> Jisung Hwang and Minhyuk Sung <span>SIGGRAPH Asia 2024</span>

## REVIEWER SERVICE

2026	ICML 2026
2026	SIGGRAPH 2026
2025	ICLR 2026
2025	SIGGRAPH Asia 2025

## TEACHING EXPERIENCE

Spring 2026	<b>CS479 Machine Learning for 3D Data</b>	<i>Teaching Assistant, KAIST</i>
Spring 2025	<b>CS479 Machine Learning for 3D Data</b>	<i>Teaching Assistant, KAIST</i>
Fall 2024	<b>CS300 Introduction to Algorithms</b>	<i>Teaching Assistant, KAIST</i>

## WORK & LEADERSHIP EXPERIENCE

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- Dec. 2025 ~ Mar. 2026     **Visiting at Igarashi Lab, University of Tokyo** *Tokyo, Japan*  
*Internship Trainee*
- Researched effective inference-time scaling in multi-step generation by tilting the noise
- Dec. 2021 ~ May 2023     **SpiderCore** *Daejeon, Republic of Korea*  
*AI Development Team Intern*
- Conducted prediction of cell-specific protein–protein interactions by multitask learning
    - Improved the ROC-AUC value by 4–18% on HeLa, HEK293, HCT116, etc.
  - Researched cross-dimensional expandability of GNN using multi-dimensional snake game
    - Showed that an RL agent trained in 2D can generalize to higher dimensions
    - Visualized 3D snake game graphically using OpenGL in C++
  - Developed and optimized Python and C++ programs to train and evaluate AI models
- Jul. 2022 ~ Sep. 2022     **KAIST-POSTECH Science War**  
*School Representative for AI Match*
- Implemented PPO, AlphaGo, and heuristic algorithms for the modified Quoridor game
  - **Led the victory in AI for the first time in 7 years**
- Sep. 2022 ~ Sep. 2023     **Vlab**  
*AI Team Developer, AI Development Club*

## EXTRACURRICULAR EXPERIENCE

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- Sep. 2020 ~ Jul. 2023     **FingS** *Fingerstyle Guitar Club*  
*Practice and Concert Manager, Group Leader*
- Trained 10 people every week for 1 year and managed 3 concerts as a sound engineer
- Sep. 2022 ~ Present     **Praiser** *Christian Band Club*  
*Electric Guitar, Bass Guitar Player*

## ADDITIONAL INFORMATION

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- Language     Fluent in Korean; Intermediate in English
- Computer     Highly-skilled in Python, C/C++, PyTorch, CUDA, Flask, Linux, Cakewalk  
Intermediate in Java, C#, Unity, MATLAB, Scala, MySQL, OpenGL
- Interests     Music Production, Playing instruments