

Jinwoo Hwang

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Education

Ph.D. in Computer Science. KAIST

Advisor: Prof. Jongse Park

Mar.2020–date

B.E. in Software Engineering. Ajou University

Mar.2016–Feb.2020

Publication

- M. Kim, **J. Hwang**, G. Heo, S. Cho, D. Mahajan, and J. Park, "Accelerating String-Key Learned Index Structures via Memoization-based Incremental Training," in International Conference on Very Large Data Bases (**VLDB**), 2024.
- Y. Kim, C. Oh, **J. Hwang**, W. Kim, S. Oh, Y. Lee, H. Sharma, A. Yazdanbakhsh, and J. Park, "DaCapo: Accelerating Continuous Learning in Autonomous Systems for Video Analytics," in International Symposium on Computer Architecture (**ISCA**), 2024.
- **J. Hwang**, M. Kim, D. Kim, S. Nam, Y. Kim, D. Kim, H. Sharma, and J. Park, "CoVA: Exploiting Compressed-Domain Analysis to Accelerate Video Analytics," in USENIX Annual Technical Conference (**ATC**), 2022.

Research Interest

- System for Video-Language Models
- Machine Learning for Systems
- System for Video Analytics
- Systems for Machine Learning

Experience

Graduate Research Assistant

CASYS, KAIST, Daejeon, South Korea

Feb.2020–date

Topic: System for AI, Advisor: Prof. Jongse Park

Undergraduate Research Assistant

CSL, Ajou University, Suwon, South Korea

Mar.2019–Dec.2019

Topic: GPU Unified Memory, Advisor: Prof. Jeongseob Ahn

Software Research Intern

Ciceron (Blockchain Startup), Seoul, South Korea

Jan.2019–Feb.2019

Topic: Blockchain Application

Undergraduate Research Assistant

DRG, UC Irvine, Irvine, CA, USA

Jun.2018–Dec.2018

Topic: Healthcare IoT, Advisor: Prof. Nikil Dutt

Honors and Awards

Gold Prize

Samsung Humantech Paper Award

2025

Distinguished Artifact Award

ISCA, DaCapo: Accelerating Continuous Learning in Autonomous Systems for Video Analytics

2024

Outstanding Teaching Assistant Award

KAIST, CS230: System Programming

Fall 2022

First Place in Student Design Contest

International SoC Conference, Energy Efficient Edge Computation in Healthcare IoT

2018

Scholarship for Academic Excellence

Ajou University

Mar.2016–Feb.2020

Services

Artifact Evaluation Committee

ASPLOS 2024. HPCA 2023.

Patents

- o Jongsge Park, **Jinwoo Hwang**, "Method and System for Accelerating Video Analysis by Exploiting Compressed-domain," Korean Patent. (Pending)

Skills

Programming Language: Python, C/C++, Triton, CUDA, Rust

Tool: Git, Docker, Linux, PyTorch, GStreamer, Ray

Language: Korean (Fluent), English (Proficient)

Teaching Assistant

KAIST	CS330: Operating System	<i>Spring 2020</i>
KAIST	CS230: System Programming	<i>Fall 2020</i>
KAIST	CS492: System for AI	<i>Spring 2021</i>
KAIST	CS230: System Programming	<i>Fall 2021</i>
KAIST	CS230: System Programming	<i>Fall 2022</i>
KAIST	CS311: Computer Architecture	<i>Spring 2024</i>

References

Jongse Park

Professor, KAIST

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