

Hyunseok Oh

✉ ohsai@snu.ac.kr | 🏠 aistudy.com/ohs | 🌐 [hyunseokoh](http://hyunseokoh.com)

PERSONAL PROFILE

As a passionate advocate for pioneering bold new ideas, I am adept at quickly transforming concepts into testable implementations. My enthusiasm for designing innovative intelligent systems is matched by my deep research interest in areas such as biologically inspired AI, next-generation AI technologies, resource-efficient AI, and theoretical machine learning. I am keen on fostering collaborations to explore new perspectives and achieve breakthroughs in these domains.

EDUCATION

Seoul National University M.S./Ph.D. in Computer Science and Engineering Advisor: Youngki Lee	Seoul, Korea Mar. 2019 -
Seoul National University B.S. in Computer Science & Engineering	Seoul, Korea Mar. 2014 - Feb. 2019

PUBLICATIONS

Conference & Journal Papers

- [C6] Papez: Resource-Efficient Speech Separation with Auditory Working Memory [\[PDF\]](#) [\[Code\]](#)
Hyunseok Oh, Juehon Yi, and Youngki Lee
IEEE International Conference on Acoustics, Speech and Signal Processing 2023 (ICASSP'23).
- [C5] VECA: A New Benchmark for General Cognitive Development. [\[PDF\]](#) [\[Code\]](#)
Kwanyoung Park*, **Hyunseok Oh***, and Youngki Lee (*Co-primary)
AAAI Conference on Artificial Intelligence 2022 (AAAI'22) [**Oral Presentation, top 4.15%**].
- [C4] On the Importance of Critical Period in Multi-stage Reinforcement Learning. [\[PDF\]](#)
Junseok Park, Inwoo Hwang, Min Whoo Lee, **Hyunseok Oh**, Minsu Lee, Youngki Lee, Byoung-Tak Zhang
ICML Complex Feedback in Online Learning Workshop 2022 (ICMLW'22).
- [C3] Toddler-Guidance Learning: Impacts of Critical Period on Multimodal AI Agents [\[PDF\]](#)
Junseok Park, Kwanyoung Park, **Hyunseok Oh**, Ganghun Lee, Minsu Lee, Youngki Lee, Byoung-Tak Zhang
ACM International Conference on Multimodal Interaction 2021 (ICMI'21) [**Acceptance Rate: 13%**].
- [C2] Learning Task-agnostic Representation via Toddler-inspired Learning [\[PDF\]](#)
Kwanyoung Park, Junseok Park, **Hyunseok Oh**, Byoung-Tak Zhang, and Youngki Lee
NeurIPS Workshop on BabyMind (NeurIPSW 2020).
- [C1] Exploring Image Reconstruction Attack in Deep Learning Computation Offloading [\[PDF\]](#)
Hyunseok Oh, Youngki Lee
ACM International Workshop on Deep Learning for Mobile Systems and Applications (MobiSysW'19).

AWARDS & HONORS

BrainKorea21 Star Student Researcher 2023, Seoul National University	2023
Graduate Student Instructor Scholarship	2019 - 2021
National Academic Excellence Scholarship, Seoul National University Science and Engineering	2014 - 2018

SKILLS

Languages Korean (native), English (fluent)

Programming Python, C/C++, Haskell, Golang, Java

Tools Docker, Git

Frameworks Pytorch, Tensorflow, Android SDK

WORK EXPERIENCE

Samsung Electronics, Mobile Division

Suwon, Korea

Student Intern (Advisor: Euteum Park)

June. 2018 - Sep. 2018

- Developed a prototype Golang-based end-to-end API Gateway for Samsung Cloud.

ACADEMIC SERVICES

AAAI Conference Main Track Technical Program Committee

2023,2024

ICASSP Conference Main Track Technical Program Committee

2023,2024

TEACHING EXPERIENCE

Teaching Assistant, Seoul National University

Fall, 2019-2020

M1522.000600 Computer Programming

Teaching Assistant, Seoul National University

Spring, 2019

M1522.002600 Advanced Mobile Computing

MENTORED STUDENTS

Jimin Chae (SNU Undergraduate, Winter)

2022-2024

Spiking Neural Network

Kwanyoung Park (SNU Undergraduate)

2019-2023

Toddler-inspired Artificial Intelligence [C2,C3,C5]

Younghoon Choi (UC Berkeley Undergraduate)

2023

Listener Identification in Parent-child Interaction

INVITED TALKS

Chosun Center for Data Science in Humanities Annual Workshop

2024

Chosun University, Gwangju, Korea

CSE AI Summer School

2023

Seoul National University, Seoul, Korea

AIIS Spring Retreat

2022

Seoul National University, Seoul, Korea

OTHER PROJECTS

Automated Classification of Child-directed Speech in Parent-Child Interaction

Listener identification with speech classification DNN.

Apr. 2023 -

Hyunseok Oh, Eon-Suk Ko, Youngki Lee

VoiceSeeker: Resource-Efficient Audio-Visual Mobile Speaker Separation

Mobile system that separates the target speaker's speech from the input mixture audio.

Feb. 2022 - Sep. 2022

Juheon Yi, Hyunseok Oh, Youngki Lee

Implicit Facial Attribute De-identification

GAN-based face image editing technique that protects all the sensitive attributes implicitly

Mar. 2020 - Feb. 2023

Hyunseok Oh, Youngki Lee

SilverStone: Privacy-Preserving and Efficient DNN Computation Offloading

Cloud-offloaded encrypted DNN inference with homomorphic tensor encryption scheme

Jan. 2019 - Dec. 2019

Hyunseok Oh, Eunsu Baek, Youngki Lee

