

SEONGHEON PARK

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RESEARCH INTERESTS

Large Language Models; Multimodal Models; AI Safety and Reliability; Embodied AI; Agentic AI

EDUCATION

University of Wisconsin-Madison

Sep. 2024 - Present

Ph.D. in Computer Science

Advisor: Prof. Sharon Li

Yonsei University

Sep. 2021 - Aug. 2023

M.S. in Electrical and Electronic Engineering

Advisor: Prof. Kwanghoon Sohn

Yonsei University

Mar. 2015 - Aug. 2021

B.S. in Electrical and Electronic Engineering

WORKING PAPERS & PREPRINTS

14. Changdae Oh, **Seongheon Park**, To Eun Kim, Jiatong Li, Wendi Li, Samuel Yeh, Xuefeng Du, Hamed Hassani, Paul Bogdan, Dawn Song, and Sharon Li, “Uncertainty Quantification in LLM Agents: Foundations, Emerging Challenges, and Opportunities,” *arXiv:2602.05073*

13. **Seongheon Park**, Changdae Oh, Hyeong Kyu Choi, Xuefeng Du, and Sharon Li, “VAUQ: Vision-Aware Uncertainty Quantification for LVLMM Self-Evaluation,” *arXiv:2602.21054*

12. Jinyuan Luo, Zhen Fang, Sharon Li, **Seongheon Park**, and Ling Chen, “Shaking to Reveal: Perturbation-Based Detection of LLM Hallucinations,” *arXiv:2506.02696*

PUBLICATIONS

11. Lin Long*, Changdae Oh*, **Seongheon Park**, and Sharon Li, “Understanding Language Prior of LVLMMs by Contrasting Chain-of-Embedding,” In *ICLR 2026*

10. **Seongheon Park** and Sharon Li, “GLSim: Detecting Object Hallucinations in LVLMMs via Global-Local Embedding Similarity,” In *NeurIPS 2025*

9. Pengyue Jia, **Seongheon Park**, Song Gao, Xiangyu Zhao, and Sharon Li, “GeoRanker: Distance-Aware Ranking for Worldwide Image Geolocalization,” In *NeurIPS 2025*

8. Min-Hsuan Yeh, Jeffrey Wang, Xuefeng Du, **Seongheon Park**, Leitian Tao, Shawn Im, and Sharon Li, “Position: Challenges and Future Directions of Data-Centric AI Alignment,” In *ICML 2025*

7. **Seongheon Park**, Xuefeng Du, Min-Hsuan Yeh, Haobo Wang, and Sharon Li, “Steer LLM Latents for Hallucination Detection,” In *ICML 2025*

6. Min-Hsuan Yeh, Max Kamachee, **Seongheon Park**, and Sharon Li, “HalluEntity: Benchmarking and Understanding Entity-Level Hallucination Detection,” In *TMLR 2025*

5. **Seongheon Park***, Hyuk Kwon*, Kwanghoon Sohn, and Kibok Lee, “Rethinking Open-World Semi-Supervised Learning: Distribution Mismatch and Inductive Inference,” In *CVPR 2024 CVinW Workshop*

4. Hanjae Kim, Jiyoung Lee, **Seongheon Park**, and Kwanghoon Sohn, “Hierarchical Visual Primitive Experts for Compositional Zero-Shot Learning,” In *ICCV 2023*

3. Minsu Kim, Seungryong Kim, Jungin Park, **Seongheon Park**, and Kwanghoon Sohn, “PartMix: Regularization Strategy to Learn Part Discovery for Visible-Infrared Person Re-identification,” In *CVPR 2023*

2. **Seongheon Park**, Hanjae Kim, Minsu Kim, and Kwanghoon Sohn, “Normality Guided Multiple Instance Learning for Weakly Supervised Video Anomaly Detection,” In *WACV 2023*

1. Dahye Kim, Jiyoung Lee, Jungin Park, **Seongheon Park**, and Kwanghoon Sohn, “Language-free Training for Zero-shot Video Grounding,” In *WACV 2023*

PROJECTS

1. **Project with Korea Institute of Science and Technology (KIST)** *Jan. 2022 - Aug. 2023*

- Project Title : Deep Identification and Tracking of Missing Persons in Heterogeneous CCTV
- Covers : Object Detection/Tracking, Video Action Classification, Person Re-Identification, Anomaly Detection

2. **Project with Ministry of Science and ICT, Mid-Level Research** *Jan. 2022 - Aug. 2023*

- Project Title : Development of Complex Situational Awareness and Prediction Technology through Multi-Modal Data Fusion and Social Artificial Intelligence
- Covers : Multi-Modal Learning, Video Understanding

3. **Project with Yonsei University-Yonsei Signature Research Cluster** *Jan. 2022 - Jan. 2023*

- Project Title : Development of Multimodal-based General-purpose Social Artificial Intelligence Technology
- Covers : Multi-Modal Learning, Zero-Shot Learning, Meta-Learning

PATENTS

1. Korean Patent, No.10-2022-0156145 (Anomaly Detection)

2. Korean Software, No.2022-0049 (Anomaly Detection)

HONORS AND SCHOLARSHIPS

Honors

- Honors Student, Yonsei University *2016, 2018-2019*

Scholarships

- Teaching Assistant Scholarship, Yonsei University *2022*
- Research Assistant Scholarship, Yonsei University *2021 - 2023*
- Brain Korea 21 (BK21) Scholarship , National Research Foundation of Korea *2021 - 2023*
- Future Vehicula Technology Scholarship, Inter-University Alliance *2021 - 2023*
- Academic Excellence Scholarship, Yonsei University *2019*

RESEARCH EXPERIENCES

University of Wisconsin–Madison, USA *Sep. 2024 - Present*
Research Assistant (Advisor: Prof. Sharon Sharon Li)

Machine Learning Lab., Yonsei University, South Korea *Sep. 2023 - Aug. 2024*
Research Assistant (Advisor: Prof. Kibok Lee)

Digital Image Media Lab., Yonsei University, South Korea *Sep. 2021 - Aug. 2023*
Research Assistant (Advisor: Prof. Kwanghoon Sohn)

Digital Image Media Lab., Yonsei University, South Korea *Jan. 2021 - Aug. 2021*
Undergraduate Research Intern (Advisor: Prof. Kwanghoon Sohn)

WORK EXPERIENCES

Republic of Korea Army Logistics Command (Military Service)

Jul. 2019 - Jan. 2021

TEACHING EXPERIENCES

- **EEE 3313: Introduction to Digital Labs** *Fall 2022*
- **EEE 4420: Digital Signal Processing** *Spring 2022*
- **EEE 6321: Image Coding** *Spring 2022*

SELECTED COURSEWORK

Data structure, linear algebra, probability and random variables, random process, special topics in deep learning, probabilistic robotics, reinforcement learning, optimization theory, information theory, special topics in pattern recognition, introduction to artificial intelligence, deep learning for computer vision, mathematical statistics, Bayesian statistics, advanced deep learning

LANGUAGE

Korean (native), English (fluent), Japanese (JLPT N1)