Seongjae Kang

Research Scientist/Engineer at VUNO

Homepage | LinkedIn | GitHub | Google Scholar | Twitter

Seoul, South Korea

RESEARCH INTERESTS

My research interest lies in developing innovative AI solutions to real-world challenges across various domains. I focus on efficient data handling through few-shot learning, self-supervised learning, semi-supervised learning, and active learning paradigms. I am also interested in developing systems to incorporate large-scale AI frameworks such as Large Language Models (LLMs) and Multimodal Large Language Models (MLLMs), enabling them to solve a variety of real-world tasks.

EXPERIENCE

VUNO **May 2024 – Present**

Research Scientist/Engineer (Military Substitution) *Seoul, South Korea*

- Working on findings/disease detection task: developing knowledge distillation framework from large foundation models for better performance and compact model deployment
- Developing active learning framework utilizing knowledge distillation from large medical vision-language foundation models
- Working on automated radiology report generation task: integrating clinical context into the automated report generation system with Multimodal Large Language Models (MLLMs)

Deepauto AI **Feb 2024 – Mar 2024**

Research Scientist/Engineer *Seoul, South Korea*

- Developed Multimodal Large Language Models (MLLMs) capable of tackling a variety of computer vision tasks
- Incorporated computer vision tasks seamlessly into MLLM framework with supervised fine-tuning

VoyagerX **Sep 2020 – Sep 2021**

Research Scientist/Engineer *Seoul, South Korea*

- Worked on machine learning model development and deployment
- Developed document quality enhancement model

SGVR Lab, KAIST **Mar 2019 – Aug 2019**

Undergraduate Research Assistant *Daejeon, South Korea*

Advisor: Prof. Sung-eui Yoon

- Developed virtual piano system that analyzes piano performances using only visual information
- Designed spatial-temporal CNN architecture with optical flow analysis to detect key press intensity and generate MIDI output

Computer Vision Lab, KAIST **Jun 2017 – Jun 2018**

Undergraduate Research Assistant *Daejeon, South Korea*

Advisor: Prof. Hyunseung Yang

- Conducted research on computer vision and deep learning

EDUCATION

KAIST (Korea Advanced Institute of Science and Technology) **Feb 2022 – Feb 2024**
M.S. in Graduate School of AI *Daejeon, South Korea*
Advisor: Prof. Sung Ju Hwang
GPA: 3.96/4.3

KAIST (Korea Advanced Institute of Science and Technology) **Feb 2016 – Feb 2022**
B.S. in Computer Science (major) and Electrical Engineering (minor) *Daejeon, South Korea*
GPA: 3.88/4.3

AWARDS & HONORS

Korea National Science & Technology Scholarship **2018 – 2021**
Korea Ministry of Science and ICT *South Korea*

1st Prize, Semantic Segmentation AI Model for Body Parts Challenge **2021**
Alchera, AI Heroes *South Korea*

Linux Master 1st Grade Certificate
Korea Information Technology Human Resources Development Institute *South Korea*

PROJECTS

Easy - Expense Report Automation Chrome Extension
Tools: Chrome Extension API, JavaScript
- Developed a Chrome extension that automates the monthly expense report process for company employees
- Reduced manual work from 1-2 hours per month to just a few minutes with minimal effort
- Significantly improved productivity and reduced repetitive administrative tasks
- Implemented automated data extraction and form filling capabilities

PUBLICATIONS

*(P: preprint, C: conference, J: journal, W: workshop, *: equal contribution)*

- **[P1] Automated Structured Radiology Report Generation with Rich Clinical Context**
  Seongjae Kang*, Dong Bok Lee*, Juho Jung, Dongseop Kim, Won Hwa Kim, Sunghoon Joo
  under review

- **[P2] PCoreSet: Effective Active Learning through Knowledge Distillation from Vision-Language Models**
  Seongjae Kang*, Dong Bok Lee*, Hyungjoon Jang, Dongseop Kim, Sung Ju Hwang
  under review

- **[P3] Simple yet Effective Semi-supervised Knowledge Distillation from Vision-Language Models via Dual-Head Optimization**
  Seongjae Kang*, Dong Bok Lee*, Hyungjoon Jang, Sung Ju Hwang
  under review

- **[P4] Virtual Piano using Computer Vision**
  Seongjae Kang, Jaeyoon Kim, Sung-eui Yoon
  arXiv preprint arXiv:1910.12539, 2019

ADDITIONAL INFORMATION

Languages: Korean (Native), English (Fluent), Spanish (Learning), Chinese (Learning)
Interests: Swimming, Language Learning, Continuous Self-improvement

Last updated on November 3, 2025