Youngmin **Kim**

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Research Interest

- *Computer Vision, Medical Image, Video Processing, Conversational AI*

Education

Yonsei University   *Seoul, Korea*
M.S / PH.D COURSE   *2023.09 - Present*
- Major : Artificial Intelligence
- Advisor (Ph.D.) : Seongjae Hwang
- Advisor (M.S.) : Youngjae Yu

Incheon National University   *Incheon, Korea*
B.S   *2016.03 - 2023.02*
- Major : Economics and Computer Science (Double Major)
- Magna Cum Laude (Top 5.9%)
- Economics Advisor : Sangyeon Hwang
- Computer Science Advisor : Hyeongboo Baek

Publications

PEER-REVIEWED CONFERENCE/JOURNAL PAPERS SlumpGuard: An AI-Powered Real-Time System for Automated
Concrete Slump Prediction via Video Analysis   *Automation in Construction (IF: 11.5)*
Youngmin Kim, Giyeong Oh, Kwangsoo Youm*, Youngjae Yu*

MAVL: A Multilingual Audio-Video Lyrics Dataset for Animated Song Translation   *EMNLP2025*
Woohyun Cho, **Youngmin Kim**, Sunghyun Lee, Youngjae Yu.

Scalp Diagnostic System With Label-Free Segmentation and Training-Free Image Translation   *MICCAI 2025*
Youngmin Kim*, Saejin Kim*, Hoyeon Moon, Youngjae Yu, Junhyug Noh.

Speaking Beyond Language: A Large-Scale Multimodal Dataset for Learning Nonverbal Cues from Video-Grounded Dialogues   *ACL 2025*
Youngmin Kim, Jiwan Chung, Jisoo Kim, Sunghyun Lee, Sangkyu Lee, Junheok Kim, Cheoljong Yang, Youngjae Yu.

Preprocessing for Keypoint based Sign Language Translation without Glosses   *Sensors (IF: 3.8)*
Youngmin Kim and Hyeongboo Baek.

A 2-Stage Model for Vehicle Class and Orientation Detection with Photo-Realistic Image Generation   *IEEE BigData 2022*
Youngmin Kim*, Donghwa Kang* and Hyeongboo Baek.

A Study of Tram-Pedestrian Collision Prediction Method Using YOLOv5 and Motion Vector   *KIPS 2021*
Youngmin Kim, Hyeonuk Ahn, Heegyun Jeon, Jinpyung Kim, Gyujin Jang, Hyeonchyeol Hwang.

Optical Flow Estimation Techniques and Recent Research Trends Survey   *KIPS Special Session*
Youngmin Kim, Hyeonuk Ahn, Jinpyung Kim.

Pedestrian Accident Prevention Model Using Deep Learning and Optical Flow   *KCC 2021, Best paper*
Youngmin Kim, Gyujin Jang, Hyunjai Bae, YoungNam Kim, Jinpyung Kim.

Survivor Detection Model using Drones and Deep Learning   *KCC 2021*
Hyunjai Bae, Gyujin Jang, **Youngmin Kim**, YoungNam Kim, Jinpyung Kim.

Deep Learning based Multiple Damage Type Detection System for Bridge Structures *KCC 2021*
YoungNam Kim, Hyunjai Bae, **Youngmin Kim**, Gyujin Jang, Jinpyung Kim.

Stereo Image and Skeleton Information based Inter-Distance Estimation for Social Distancing *KCC 2021*
Gyujin Jang, Hyunjai Bae, **Youngmin Kim**, YoungNam Kim, Jinpyung Kim.

Professional Experience

2023-2023   **Undergraduate Research Assistant**, MIR Lab., Yonsei University
2021-2023   **Undergraduate Research Assistant**, RAISE Lab., Incheon National University
2020-2021   **Research Assistant**, CVAI Lab., AICT

Awards, & Scholarship

2021   **1st prize**, AI-Hub Idea Challenge Competition *NIA*
      1st prize, KCC 2021 Undergraduate Paper Competition *KIISE*
      2nd prize, KED 2021 Industrial Innovation Big Data Platform Competition *KED*
      Scholarship for Academic Excellence, 1st semester *INU*
      Scholarship for Meritorious Service, *INU*

2020   **Scholarship for Academic Excellence**, 1st semester *INU*

Projects

NATIONAL OR ENTERPRISE

2025. **LG Electronic**, *Multimodal Recommendation System*.

2024-25. **GS**, *Video-based Slump Prediction*.

2024. **NCSOFT**, *Multimodal Conversational Agent*.

2021. **BlackStone Belle-Forest**, *Smart Eco Service - Object Counting*.

2021. **NIA**, *Building AI training data for search and rescue using drones*.

2020. **KAIA**, *Development of high-performance and highly durable tires for light rail systems and a safety-enhancing health monitoring system*.

2020. **KRRI**, *Integrating algorithms to enable self-driving trams to operate in bi-directions*.

Teaching Experience

2024   **Introduction to AI Research**, Teaching Assistant *Yonsei Univ*
2024   **Reinforcement Learning**, Teaching Assistant *Yonsei Univ*
2023   **Basic of PyTorch**, Teaching Assistant *Upstage*
2023   **Samsung AI Education**, Teaching Assistant *Samsung*

Extracurricular Activities

2021-2022   **BOAZ**, 16th member of the Big Data Alliance Club, Big Data Analysis Part *Seoul*
2020   **Public Big Data Youth Internship**, 2nd member, Government-funded program *Seoul*

Granted Patents

Apparatus and Method for Analyzing data, Apparatus, and Method for Predicting Abnormality, Computer Program

1024803940000

Electronic Apparatus and Method for Searching Distress, Unnamed Aerial Vehicle, Computer Science

1025873110000

Method and Apparatus for Avoiding Collision between Vehicle and Object, Computer Science

1025334190000

Military Service

Korean Army, Ground Operations Command   *2016.07 - 2019.03*

ARMY SERGEANT, HONORABLE DISCHARGE