

# Seokjun Kwon

M.S STUDENT · SEJONG UNIVERSITY

Daeyang AI Center, 05006, Seoul, Repulic of Korea

✉ sukzoon1234@gmail.com | 🏠 sukzoon1234.github.io | 🌐 github.com/sukzoon1234

## Education

### Sejong University

M.S IN DEPARTMENT OF AI ROBOTICS

- Advisor: Prof. Yukyung Choi

Seoul, South Korea

Mar.2024 -

### Sejong University

B.S IN DEPARTMENT OF INTELLIGENT MECHATRONICS ENGINEERING

- Honors: Cum Laude (Overall GPA: 3.94/4.5, Major GPA: 4.24/4.5)
- Undergrad advisor: Prof. Yukyung Choi

Seoul, South Korea

Mar.2018 - Feb.2024

## Publications

### [C3] Boosting Cross-spectral Unsupervised Domain Adaptation for Thermal Semantic Segmentation

May, 2025

**SEOKJUN KWON\***, JEONGMIN SHIN\*, NAMIL KIM, SOONMIN HWANG, AND YUKYUNG CHOI

- International Conference on Robotics and Automation (ICRA)
- Acceptance Rate: 38.7%

### [C2] A Two-Stage Framework for Small Character Detection in the Manufacturing Industry

Nov, 2024

YUNSEO JEONG\*, **SEOKJUN KWON\***, JEONGMIN SHIN AND YUKYUNG CHOI

- International Conference on Control, Automation and Systems (ICCAS)

### [J1] UMHE: Unsupervised Multispectral Homography Estimation

Apr, 2024

JEONGMIN SHIN, JIWON KIM, **SEOKJUN KWON**, NAMIL KIM, SOONMIN HWANG, AND YUKYUNG CHOI

- IEEE Sensors Journal
- Impact Factor: 4.3 (SCIE, Q1)

### [C1] Unsupervised Domain Adaptation with Mutual Learning for Semantic Segmentation for Thermal Images

Feb, 2023

**SEOKJUN KWON**, JEONGMIN SHIN, DAECHAN HAN, AND YUKYUNG CHOI

- Image Processing and Image Understanding (IPIU)
- Bronze Prize, **Best Paper Award**

## Research Experience

### Research on Autonomous eVTOL Core Convergence Technology for Urban Air Mobility (UAM).

Sejong Univ

FUNDED BY THE MINISTRY OF SCIENCE AND ICT (MSIT)

Jul. 2024 - Current

- Developed an open-vocabulary object detection algorithm for autonomous eVTOL driving and landing.

### Development of an AI-Based High Resolution Low Power Smart Camera and Machine Vision Integrated Solution for Defect Detection in Manufacturing

Sejong Univ

FUNDED BY MINISTRY OF TRADE, INDUSTRY AND ENERGY (MOTIE)

Apr. 2023 - Current

- Developed a real-time small character detection algorithm for machine vision camera. [C2]

### ICT Challenge and Advanced Network of HRD

FUNDED BY THE MINISTRY OF SCIENCE AND ICT (MSIT)

- Developed a model for estimating the tomography matrix between RGB and Thermal Images. [J1]

Sejong Univ  
Jul. 2022 - Current

### Development of AI Camera Technology to Support Battlefield Environmental Awareness and Weapon System Performance

FUNDED BY THE MINISTRY OF SCIENCE AND ICT (MSIT)

- Developed a domain adaptation algorithm for a thermal sensor-based semantic segmentation task. [C3, C1]

Sejong Univ  
Mar. 2022 - Feb. 2023

## Awards

---

MSIT 1ST AUTONOMOUS DRIVING AI CHALLENGE

- **3rd Prize**

- Developed object detection and instance segmentation algorithms for autonomous driving car.

THE 35TH WORKSHOP ON IMAGE PROCESSING AND IMAGE UNDERSTANDING (IPIU)

- Bronze Prize, **Best Paper Award**

Nov, 2024

Feb, 2023

## Patents

---

METHOD FOR DETECTING DEFECTS IN MANUFACTURING INDUSTRIAL PRODUCTS AND APPARATUS

- Korea patent (applied) No. 10-2023-0118908

Sep, 2024

CROSS SPECTRAL UNSUPERVISED DOMAIN ADAPTATION METHOD AND APPARATUS

- Korea patent (applied) No. 10-2024-0113714

Aug, 2024

MULTISPECTRAL HOMOGRAPHY ESTIMATION METHOD AND APPARATUS

- Korea patent (applied) No. 10-2023-0054572

Apr, 2023

## Teaching Experience

---

### Deep Learning System

INSTRUCTOR: PROF. YUKYUNG CHOI

- Role: Head Teaching Assistant

Spring, 2024

### Artificial Intelligence

INSTRUCTOR: PROF. YUKYUNG CHOI

- Role: Teaching Assistant

Fall, 2023

### Machine Learning

INSTRUCTOR: PROF. YUKYUNG CHOI

- Role: Teaching Assistant

Spring, 2023