YoungMin Kim

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EDUCATION

Incheon National University, Incheon, Korea — *Mar. 2016 ~ Expected Feb. 2022.08*
College of Information Science, *Computer Science and Engineering*
College of Law, Politics & Public Affairs, *Economics*
Relevant Coursework:

- Linear Algebra
- Data Science
- An Easy Statistics Theory
- Compiler Design
- Mobile Software
- The Application of Basic Statistics with R
- The Basics of Artificial Intelligence (KMOOC)
- Machine Learning (KMOOC)
- Artificial Intelligence and Deep Learning
- BigData
- Probability and Statistics
- Discrete Mathematics
- Public BigData Youth Internship Education
- Image Processing
- Data Structure

RESEARCH INTERESTS

- Computer Vision (Image Generation and Object Detection)
- Artificial Intelligence
- Machine Learning & Deep Learning
- BigData Analysis

WORK EXPERIENCES

BOAZ 16th member and operating group member (Bigdata Alliance Club) — **Seoul, Korea**
Member — *Jan. 2021 - Jan. 2022*
- Image Generation Paper Review & Application(GAN, CycleGAN)
- Practice Data Analysis with Kaggle Competition

Advanced Institute of Convergence Technology; AICT (Computer Vision & AI Lab) — **Suwon, Korea**
Researcher — *Sep. 2020 - Aug. 2021*
- Computer Vision Algorithm Development using Pytorch, YOLOv5 Algorithm Tuning
- Analysis of Sensor Data
- UI Development using PyQt5

2nd Public BigData Youth Internship — **Seoul, Korea**
Student — *June. 2020 - Sep. 2020*
- Conducted project regarding Standard Analysis Model using python, QGIS, R
- Conducted project Selection the Optimum Location of Cheongju Roundabout in South Korea

EXPERIENCES OF PROJECTS

Smart Eco Service (People & Car Counting) (Client: Black Stone Belle Forest) — *Mar. 2021 - Apr. 2021*
- Object Counting using YOLOv5 and Object Tracking using DeepSort and Centroid tracking Algorithm
- Mounting Algorithm to Jetson Nano and Interworking management server(with rockwonit)

AI learning data for search video of survivors using drones (Management: NIA) — *Feb. 2021 - Apr. 2021*
- Survivors Detection in 4K images using YOLOv5
- Development of UI Service

High-performance and high-durable tires for light rail and safety-enhancing health; Developing monitoring technology (Management: KAIA) *Nov. 2020 - Dec. 2020*

• Anomaly Detection & Impact Analysis in Tire Health Sensor Data

Integration of algorithms considering two-way driving of self-driving tram (Client: KRRI) *Sep. 2020 - Dec. 2020*

• Development of Pedestrian Progress Direction Prediction and TTC Prediction Algorithm using YOLOv5 and Optical Flow
• Interworking with algorithms and ROS
• Development of GPS estimation technology for trams

PAPER

• YOLOv5 와 모션벡터를 활용한 트램-보행자 충돌 예측 방법 연구

김영민, 안현욱, 전희균, 김진평, 장규진, 황현철

한국정보처리학회(KIPS) Accepted

• 딥러닝과 Optical Flow 를 활용한 보행자 사고 방지 모델

김영민, 장규진, 배현재, 김영남, 김진평

*한국정보과학회(KCC2021) Accepted , **Best paper***

• 딥러닝 기반 교량 구조물 다중 손상유형 탐지 시스템

김영남, 장규진, **김영민**, 배현재, 김진평

한국정보과학회(KCC2021) Accepted

• 드론과 딥러닝을 활용한 조난자 탐지 모델

배현재 **, 김영민 ,** 김영남**,** 장규진, 김진평

한국정보과학회(KCC2021) Accepted

• 사회적 거리 두기를 위한 스테레오 영상과 스켈레톤 정보기반 객체 간 거리 추정 방법

장규진**,** 배현재 **, 김영민 ,** 김영남, 김진평

한국정보과학회(KCC2021) Accepted

Patents

• Apparatus and Method for Analyzing data, Apparatus and Method for Predicting Abnormality, Computer program (10-2020-0186453) Patent Share 10%

• Electronic Apparatus and Method for Searching Distress, Unnamed Aerial Vehicle, Computer program *(Expected to apply)* Patent Share 10%

• Method And Apparatus for Avoiding Collision between Vehicle and Object, Computer Program *(Expected to apply)* Patent Share 10%

Contest

KCC 2021 Undergraduate Paper Competition in Smart City Section(Top Prize) *June. 2021 - July. 2021*

• Pedestrian Accident Prevention Model Using Deep Learning and Optical Flow(First Author)

KED 2021 Industrial Innovation Big Data Platform Competition (Excellence Prize) *Apr. 2021 - June. 2021*

• Standard industry code classification(using BERT)

2nd Computer Vision Learning Contest (Top 25%) *Feb. 2021 - Mar. 2021*

• Multi-label Classification using EfficientNet-B3

SKILLS & Certificate

Skills	Python, Pytorch, Ubuntu, Nvidia MiniPC(Basic), ROS(Basic), R(Basic)
Certificate	ADsP, SQLD, 정보처리기능사