# Songeun Kim
## ML Software Engineer

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Machine learning engineer with 5+ years of experience in academia and industry, developing real-time perception systems, especially for computer vision, AI, edge deployment and MLOps.

## TECHNICAL SKILLS

**Languages & Libraries** | Python · C/C++ · PyTorch · Sklearn · Pandas · OpenCV

**AI Optimization** | Quantization, Pruning, cross-platform inference

**Tools** | CMake · Git · Docker · Kubeflow · AWS

## EXPERIENCE

**3i Inc, Seoul** - *Machine Learning Engineer* | **Dec 2021 - Feb 2025**
- Worked on image processing and computer vision models for the Pivo Tracking System
- Developed image enhancement system with image processing and a diffusion-based model.
- Optimized real-time object detection system using compression and Vulkan GPU acceleration.
- Designed ML pipelines for data collection, training and evaluation of object detection models.

**CRVL Lab KNU, Daegu** - *ML Researcher* | **Sep 2019 - Aug 2021**
- Compressed object detection models for Jetson Nano, achieving 2x inference speed.
- Built a fisheye street-view dataset for autonomous driving
- Tuned detection models (YOLOv3, CenterNet) for wide-angle images and edge deployment.

**YUJIN MECHATRONICS, Daegu** - *Software Engineer* | **July 2018 - Nov 2018**
- Processed 3D depth sensor data for robot perception.
- Employed image filtering algorithms for object detection and localization.

## PROJECT

**Visual Object Group Tracking** | **Jan - Apr 2024** | **3i Inc**
- Implemented the tracking integrated with Pivo Pod hardware to compute target locations.
- Designed a sorting algorithm to select suitable targets and group them into a unified bounding box.
- Built and trained a custom dataset focused on tracking sport players.

## EDUCATION

**Kyungpook National University, Daegu** - *M.S Electronics Engineering* | **August 2021**

**Kyungpook National University, Daegu** - *B.S Electronics Engineering* | **August 2019**

**Metropolia University of Applied Science, Helsinki** - *Exchange program* | **Aug-Dec 2019**