**Minjun Shim**

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**INTERESTS**

**EDUCATION**

**Kyunghee University**  **Mar 2022 – present**

*Undergraduate Student*

Summa cum laude  Seoul,South Korea

• **B.S.** in Big Data Analytics

• GPA: 4.07 / 4.3 (98.23 / 100)

**WORK EXPERIENCE**

**Nearthlab.** *Machine Learning Engineer – perception team* **Aug 2022 – Present**

• Built a **MLOps pipeline** that preprocesses data, evaluates, trains, and analyzes results with Airflow and versioning datasets and models with Wandb.

• By predicting the rotated angle with the anchor-free method, we created a model with 2% higher accuracy in AP@50 than YOLOv7, a SOTA model among anchor-based horizontal detection models.

**SNUAILAB.** *AI Researcher* **Mar 2021 – Jul 2022**

• Conducted **LG Display PCB** pattern Super-Resolution model with SanghyunSon in Computer Vision lab at Seoul National University.

• Restoring sharp information from Low-Resolution, the network of Real-ESRGAN, which has the best performance in the GAN series, is transplanted to EDSR, and MS-SSIM loss is added to improve structure restoration performance.

• Created Model Experience Web page with NVIDIA Triton Inference Server SDK and BentoML.

**NaverWebtoon.** *Internship, AI Researcher* **Aug 2020 – Jan 2021**

• Designed a **detection model for webtoon dataset**, mixing CIoU and GIoU loss in 3 resized feature maps between ground truth and predicted box and got a SOTA result of COCO AP 76.8.

• Designed a classification model to classify nude images in webtoons and analyzed results with GradCam. Improved from 71% accuracy to 97.24% through the rethinking of categorization and CutMix augmentation. This model will be used in US webtoon service.

**SSNetworks(self-startup). [**[**app video**](https://youtu.be/x29jD229Fsk)**] [**[**remote control video**](https://youtu.be/reR-mCQ5mmg?t=45)**] May 2018 – Jan 2020**

*CTO, Korean Cowshed Management Open Platform*

• Led a team of 3 engineers to build an end-to-end monitoring system consisting of an ML server, web server, MongoDB, RaspberryPi control board, and android app with **400 CCTVs at 70 farms**.

• Gathered 245,639 cow mounting motion images – labeled 26139 images by humans and auto-labeled 219500 images by trained object detection model (accuracy: 91% with YOLOv3-spp)

• **Earned $70,000** by 70 farms subscribing to our platform in 18 months, received $3,000 of investment from Chonnam National University and $4,000 of winning Capstone Contests.

**Intelligent Media & Interface Lab**, Chonnam National University **Dec 2015 – Aug 2020**

*Research Assistant (Adviser: Professor Chilwoo Lee)*

• Founded a startup, Korean Cowshed Management Open Platform, May 2018

• Received two best paper awards at the SMA 2019 and KISM 2019

**HONORS AND AWARDS**

Gold Prize in Capstone Design Conference, *Chonnam National University*, 2019

Semester High Honors Scholarships, *Chonnam National University*, 2015, 2016, 2017

**EXTRACURRICULAR ACTIVITIES**

• Military Service in South Korea, July 2017 – June 2019

• DeepLearning.ai Specialization, *Coursera*, 2018 [[certificate](https://www.coursera.org/account/accomplishments/specialization/W6V83RKYSHRA)]

• Member of Space Technology Start-up Community, *Korea Aerospace Research Institute*, 2015, 2017

• 2nd Dongbu College Student Business Experience Camp, *Dongbu Electronics*, Dec 2015

**SKILLS**

PyTorch, TensorFlow, Python, TensorRT, Airflow, WandB, BentoML, Git, Docker, Vue.js

**PUBLICATIONS**

Seyeong Han and Chilwoo Lee. 2019. Development of Smart Cowshed Management System for Hanwoo based on Deep Learning.  
*The 8th International Conference on Smart Media & Applications 2019.* [[pdf](https://drive.google.com/drive/folders/1DufF-CpQPQ5njbF8qdQ7jHv9poHdXozK?usp=sharing)][[video](https://youtu.be/reR-mCQ5mmg)](**Best paper award**)

Seyeong Han and Chilwoo Lee. 2019. Deep Learning-based Mating Motion Recognition to Improve Korea Native Cattle Breeding Rate. *Korean Institute of Smart Media, Fall, 2019.* [[pdf](https://drive.google.com/drive/folders/16CJmN_7Kuyu4RnMbVFrhi3xzooPqfYLx?usp=sharing)](**Best paper award**)