

Kyuhwan Shim

kyuhwan.shim@sogang.ac.kr • <https://underthelights.github.io> • LinkedIn

INTERESTS	Computer Vision (Object Detection & Segmentation), Application of Deep Learning	
RESEARCH EXPERIENCE	Undergraduate Student Researcher, BI Lab , CS, Seoul Nat'l U., Korea	Dec 2023 – Aug 2024
	▪ [Research Topic] TBD, Advised by Byoung-Tak Zhang	
	Mentee, Lee Lab , Data Science, Seoul Nat'l U., Korea	Dec 2023 – Feb 2024
	▪ ExploreCSR Supported by Google ExploreCSR & Graduate School of Data Science	
WORK EXPERIENCE	Machine Learning Engineer Intern, Nota Inc. Seoul, Korea	Mar 2023 – Aug 2023
	▪ [Vision] Develop YOLO-based AI models for Intelligent Traffic System	
	▪ [Edge AI] Inference Traffic Data Extractor Model on NVIDIA AGX Orin (at Deepstream 6.1.)	
	▪ [MLOps/DevOps] Construct ML Pipeline on kubeflow, AWS data lake, Git Action	
	Senior Designer, OCONNECT Ulsan, Korea	Jun 2020 – Feb 2023
	▪ Student Startup which makes Easy-Insert Socket, OneStep (CEO Hyeong-Jun Bang)	
	▪ [R&D PRJ] at Didimdol R&D start-up growth technology '22	
	▪ [Achievement] Winner @ James Dyson Award '22 KR, Ulsan Collegiate Startup Competition	
EDUCATION	Sogang University , Seoul, Korea	
	▪ B.S. in Computer Science : (RecSys A+, ML A0)	Mar 2019 – Presents
	Chungnam Science High School , Kongju, Chungnam, Korea	
	▪ H.S.D. in Informatics	Mar 2016 – Feb 2019
MILITARY DUTY	Yeongdong Firestation , Yeongdong, Chungbuk, Korea	
	▪ Korea Conscripted Firefighters Agency, Yeongdong Rescue & Firehouse	Aug 2020 – Apr 2022
AWARDS	Grand Prize (1st Place) , Gangseo-gu Office	
	▪ [PPT] Risk Rating Model for Small Business Owners in Gangseo-gu using the Credit Rating Model	
	• Mayor of Gangseo-gu Office Award	2023
	Grand Prize (Nat'l Information Society Agency President Award) , NIA, Minister of Sci. & Tech.	
	▪ BIGCONTEST Data Analytics Innovation League 2022 Grand Prize (Runner-Up)	
	▪ [PPT] [PRJ] Carbon Footprint Calculator & Eco-friendly JEJU travel route RecSys.	2022
	Excellence Award , Chung-nam Science Fair (64th)	
	▪ [Poster] Solar Power System considering the impact of Wave Height	2018
	Special Prize , Chung-nam Science Fair (63th)	
	▪ [Poster] Laser Cutting Machine Using Mechanum Wheels	2017
SCHOLARSHIPS	Sogang Alumni Scholarship , Sogang University Alumni	
	▪ 1-Semester full scholarship - General (2020), Startup (2022)	
	▪ Priest Villarreal Memorial (2023) : [Link] Scholarship from Smilegate	
	Albatross Scholarship , Sogang University	
	▪ 1-year full scholarship for talent in SW Fields	2019
	Myunghak Scholarship , Kongju Myunghak Scholarship	2017
	Samsung Dream Scholarship , Samsung Dream Scholarship Foundation	2016
ACTIVITIES	[Samsung AI Challenge] / SAIT Camera-Invariant Domain Adaptation Challenge	
	▪ [DACON Link] [Google Drive] Development of a Domain Adaptive Semantic Segmentation Algorithm Robust to Camera Characteristic Changes	
	▪ Public / Private Leaderboard Top 30 with 'SePiCo' [GitHub] [Paper]	
	▪ [Link] Invited to join Samsung Electronics' talent pool	Sep 2023- Sep 2023
	[LG Aimers / LG AI Research]: Online AI Education & Hackathon	
	▪ [DACON Link] Smart Factory Product Quality Status Classification AI Online Hackathon	
	▪ Phase 3 Online Hackathon Finalist, Phase 2 Top 29 (3%, 29/891)	Jan 2023- Mar 2023
	INSIGHT: Data Science, Business School of Sogang U.	

	<ul style="list-style-type: none"> ▪ Data Analysis & ML/DL Leading TA, Various Projects (RecSys, NLP, etc.) 	Sep 2022- Jun 2023
	Round 1, Google Code Jam	Jul 2021
	Co-Founder, Chief Design Officer, Programmer, OCONNECT	
	<ul style="list-style-type: none"> ▪ Assist developing ONESTEP, an easy-insert socket ▪ Design IR Document & Assist on Operation to developing an Moissanite Product 	Jun 2020- Present
	Google Machine Learning Bootcamp, Google Korea	
	<ul style="list-style-type: none"> ▪ Coursera DL Specialization, Certificate in Tensorflow Developers ▪ Kaggle Competition, Online Webinar & Tech Talks 	Sep 2021- Dec 2021
	Sogang ICPC Team, Sogang University CSE	
	<ul style="list-style-type: none"> ▪ Algorithm Problem Solving Group 	Mar 2019 – Present
CERTIFICATES	Certificate in Tensorflow Developers , Tensorflow Certificate Program	Oct 2021 – Oct 2024
	Advanced Data Analytics Semi-Professional , Korea Data Agency	Apr 2021
	ITQ OA Master for Microsoft Powerpoint, Excel, Hancm Hangul	Oct 2011
	GTQ Lv-2 for Adobe Photoshop	Oct 2011
MEDIA	'Nunettine' wins Grand Prize at Gangseo-gu Big Data Contest , Sogang People	May 2023
	'DAVENGERS' wins '22 BIGCONTEST Data Analytics Innovation League , Sogang People	Dec 2022
	UNIST venture 'OCONNECT' wins James Dyson Awards 2022 , UNIST Press	Sep 2022
SPEECH	<ul style="list-style-type: none"> ▪ [PDF] Seminar Domain Adaptation at Release (Sogang CS) ▪ [PDF] Seminar YOLOv8 Seminar at Nota ▪ [PDF] Speech at Carbon Neutral Workshop - held by Shinhan Card & World Bank 	Dec 2023 Mar 2023 2023
LANGUAGES	<ul style="list-style-type: none"> ▪ Korean: Native ▪ English: Fluent ▪ Hanja : Lv-3 (Korea Association for the Promotion of Hanja Edu.) 	
SKILLS	<ul style="list-style-type: none"> ▪ ML Framework: PyTorch, TensorFlow ▪ Programming : C/C++, Python (Intermediate), Verilog, MATLAB, Assembly Language, \LaTeX (Novice) ▪ MLOps & DataOps : AWS, GCP, Edge Devices (NVIDIA AGX Orin), Docker, Kubeflow 	
PROJECTS	Samsung AI Challenge - Camera Invariant Domain Adaptation	Sep 2023 –Oct 2023
	<ul style="list-style-type: none"> ▪ [PPT] Domain Adaptation for Fisheye Images with SePiCo ▪ [My Job] Applying Fisheye Augmentation, Transformer based Segmentation model, Model Research ▪ [Tech Stack] Python, Pandas, NumPy, PyTorch Hyunjae Kim, 	
	Game Review Dashboard Implementation with NLP Sentimental Analysis	May 2023 –Jun 2023
	<ul style="list-style-type: none"> ▪ [PPT] Game Review Analysis Dashborad applying NLP Methods : BiLSTM, KoBERT (Fine-tuned) ▪ [My Job] Developing Game Review NLP Dashboard Main Page Configuration ▪ [Tech Stack] Python, Pandas, NumPy, PyTorch, TensorFlow, Docker, FastAPI, KoNLPy, Plotly ▪ [Team NT Fragile] Hyunjae Kim, ChanJoong Lee, Beomyun Kwon, Chanho Park, Minhye Lee 	
	Risk Rating Model for Small Business Owners using the Credit Rating Model	Mar 2023 –May 2023
	<ul style="list-style-type: none"> ▪ [Award] [PPT] Mayor of Gangseo-gu Office Award ▪ Integrated data in Gangseo-gu, focusing on data from the Seoul Credit Guarantee Foundation ▪ Risk Rating model for small business owners in Gangseo-gu using the credit rating model ▪ [Link] Creating a Risk Index Dashboard with Tableau ▪ [My Job] Data Analysis & Processing, Designing Presentation ▪ [Tech Stack] Python, Pandas, NumPy, Tableau ▪ [Team NUNETTINE] Heejin Park, Mijung Bang 	
	Development of Carbon Footprint calculator	
	& Eco-friendly travel route recommendation system in Jeju Island	Sep 2022 – Oct 2022
	<ul style="list-style-type: none"> ▪ [Official Project Link] Innovation League Grand Prize (Runner-Up) @ BIGCONTEST '22 • [Award] [PPT] Nat'l Information Society Agency (NIA) President Award 	

- **[My Job]** Develop with Streamlit & Deploy with Streaming Sharing, Design an Official Project Webpage, CI/CD with GitHub
 - Assist on applying NLP methods and designing an user-specific ML algorithm
- **[1] Carbon Footprint Calculator** Construct Carbon Footprint Calculator by Travel Area
 - Defined Categories : Traffic, Food, Accommodation and Tourism
 - Crawling raw data from 'VISIT JEJU' & 'NAVER Map'
 - Processing & Cleansing & EDA and Design Calculator Logic for those 4 categories
- **[2] Eco-Friendly & User-Specific JEJU Travel Route Recommender System**
 - **[Traveler Feature Hexagon]** Deployed with Streamlit
 - **[Link]** Score Calculation by Tourist Spot with NLP, Word2Vec, t-SNE, Clustering
 - **[Link]** Rule-Based Machine Learning Algorithm
- **[Team DAVENGERS]** Jeonghyun Ha, Kyunghoon Na, Kyungjoo Ko, Hannah Jung
- **Skill Stack**
 - Main Language : Python
 - Library : Pandas, Streamlit, Matplotlib, Plotly, Seaborn, NumPy, GeoPy
 - Develop Environment : Jupyter Notebook, Google Colaboratory (Windows 10, Mac OS X)
 - Deployment : Streamlit Sharing
 - CI/CD & Cooperation with GitHub

Shell Project, System Programming, Sogang University

Apr 2022 – Apr 2022

- **[GitHub Link]** Design my own Shell which translates user's command to the Kernel
- [1] Built my own linux shell with C Language, which executes with Linux Basic Command such as 'cd', 'mkdir', 'rmdir', et al.
- [2] Create child process with 'fork()' function, and parent process create a new child process for each instruction by parsing from a Pipelined command.

Stock Server Project, System Programming, Sogang University

May 2022 – May 2022

- **[GitHub Link]** Construct a concurrent stock server which can be connected by multiple clients that ask to buy or sell stocks concurrently
- [1] Two Approaches to serve stock server : Event-based, and Thread-based
- [2] Show the status of current stock written from stock.txt file
- After command exit() from the server, update stock.txt file with the rewritten stock status

OCONNECT

<http://oconnect.kr>



ONE STEP, an easy to plug in outlet

REP.	CEO Hyeong-Jun Bang		
MEMBERS	CTO Jinseo Park CDO Kyuhwan Shim		
LOCATION	UNISPARK, UNIST Bldg. 307 1F, 50, UNIST-gil, Eonyang-eup, Ulju-gun, Ulsan, Republic of Korea		
AWARDS	<ul style="list-style-type: none">▪ JAMES DYSON AWARD 2022 - Nat'l, Korea, James Dyson Foundation<ul style="list-style-type: none">▫ Winner (TOP 3), International Competetion Jul 2022▪ PIN UP Concept Design Award 2021, KAID<ul style="list-style-type: none">▫ BEST 100 in Living Goods Design Dec 2021▪ Busan-Ulsan-KyungPook Startup Day Innovation Ventures League Samsung Electronics KyungPook, Ulsan, Busan Creative Econ. & Innov. Center<ul style="list-style-type: none">▫ Excellence Prize at Futures' League Dec 2021▪ Challenge K-Startup Expo : Collegiate Competition Ministry of SMEs and Startups, Korean Institute of Startup & Entrepreneurship Developement<ul style="list-style-type: none">▫ Top 10, Offline Exhibition Oct 2021▫ Top 50, Offline Exhibition Aug 2019▪ Social Challenge alpha 7, OhMyCompany, BSS, LISCC<ul style="list-style-type: none">▫ Challenge Award, Crowd Funding (Funded 1,424,000 KRW) Sep 2020 – Dec 2020▪ Ulsan Collegiate Startup Excellent Idea Contest Ulsan Creative Econ. & Innov. Center<ul style="list-style-type: none">▫ Winner : Grand Prize Nov 2020▪ Institute of Science & Technology Startups Competition KAIST, GIST, DGIST, UNIST, POSTECH<ul style="list-style-type: none">▫ Representative of UNIST (Top 2 at UNIST) Dec 2020▫ Representative of UNIST (Top 3 at UNIST) Nov 2019		
FUNDINGS & SUPPORT PROGRAM	<ul style="list-style-type: none">▪ DIDIMDOL First Step - Startup Growth Development Project, Ministry of SMEs and Startups,<ul style="list-style-type: none">▫ Recommended from Ulsan Creative Econ. & Innov. Center Aug 2022 – Jul 2023▪ Ulju Youth Startup Academy, Ulsan Youth Startup Center Mar 2022 – Dec 2022▪ Pre-IBK Changgong @ UNIST, UNIST, IBK Changgong Jul 2022 – Nov 2022▪ Private-Sector Open Start-up Revitalization Project, Ulsan Creative Econ. & Innov. Center May 2022 – Oct 2022▪ BUSAN BIGS Program, Busan-si, KSD, KHUG, KOSPO, HF, KIBO, Busan PA, BNK Mar 2022 – Sep 2022▪ Innopolis Campus for Ulsan Collegiate, UNIST, Innopolis Jun 2021 – Aug 2022▪ 12th UEPA Startup Incubator, Ulsan Youth Startup Center Mar 2021 – Dec 2021▪ SBC Youth Entrepreneurship Academy, Korea SMEs and Startups Agency<ul style="list-style-type: none">▫ Most Funded Startup Company (100,000,000 KRW)▫ Excellent Completion at Pre-School		

	<ul style="list-style-type: none"> ▫ 'Pre-School' Completion of Excellence & Youth Startup Academy Nov 2020 – Nov 2021 	
	<ul style="list-style-type: none"> ▪ UNIST Unicorn Start-Up Support Program, UNIST <ul style="list-style-type: none"> ▫ Funding (12,000,000 KRW) ▫ Participated for Four Semesters 	Sep 2019 – Feb 2021
	<ul style="list-style-type: none"> ▪ KISED Pre-Startup Package (General Field), Korea Institute of Startup & Entrepreneurship Development <ul style="list-style-type: none"> ▫ Most Funded (70,000,000 Won) 	Apr 2020– Dec 2020
ACTIVITIES	<ul style="list-style-type: none"> ▪ Ulsan Knowledge-Technology Startup Center, Ulsan Technopark ▪ Patent IP Training Education, Intellectual Property Office ▪ K-Camp Busan, Krypton 	Oct 2020 Jun 2020 – Dec 2020 Nov 2019 – May 2020
MEDIAS	<ul style="list-style-type: none"> ▪ UNIST Startup OCONNECT wins at JAMES DYSON AWARD 2022, UNIST Press, CHOSUN Ilbo, Segye Ilbo, Sisa-news, Newsis ▪ UNIST 2021 Innopolis Performance Presentation, UNIST Press, UlsanDaily, ETNews ▪ UNIST UNISPARK for Young Entrepreneurs UNIST Magazine 2021 Winter ▪ Southeast Venture Competition held by UNIST Lab Startup Innovation Group The Korea Economy TV ▪ "New evolution of electrical outlets..." OneStep is released The Korea Economic Daily ▪ "Make a 'National Outlet' which 'Connects' warmth to each other" UNIST Magazine 2021 Spring ▪ "Doing businesses regardless of COVID-19" - Leap forward with technology SBS, UBC 	Feb 2022 Feb 2022 Dec 2021 Dec 2021 Dec 2021 Feb 2021 Feb 2021
PATENTS	<ul style="list-style-type: none"> ▪ Patent Registration ▪ Patent Application <ul style="list-style-type: none"> ▫ Design Registration Application, H. J. Bang(2021) ▪ International PCT Application ▪ Trademark Application 	