Kyuhwan Shim

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INTERESTS
Computer Vision (Object Detection & Segmentation), Application of LLM

WORK EXPERIENCE

Machine Learning Engineer Intern, Nota Inc. Seoul, Korea — Mar 2023 – Aug 2023
- **[Computer Vision]** Develop Vision-based AI models for Intelligent Traffic System
  - Application & Experiment SOTA Computer Vision Model (YOLO Detection)
- **[EdgeAI]** Inference Traffic Data Extractor Model on NVIDIA AGX Orin (at Deepstream 6.1.)
- **[MLOps]** Supplement ML Pipeline (kubeflow, Docker and GCP)
- **[Data/DevOps]** Construct Data lake for processing public data (AWS, GitHub 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 — 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
- **[PDF] Speech** at Carbon Neutral Workshop of Shinhan Card & World Bank — 2023

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) — 2020, 2022

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

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, Hancom Hangul — Oct 2011
GTQ Lv-2 for Adobe Photoshop — Oct 2011

ACTIVITIES

LG Aimers: Online AI Education & Hackathon, LG AI Research & DACON
- Subject : 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.
- 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
- 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
- Coursera DL Specialization, Certificate in Tensorflow Developers
- Kaggle Competition, Online Webinar & Tech Talks   Sep 2021- Dec 2021

Sogang ICPC Team, Sogang University CSE
- Algorithm Problem Solving Group   Mar 2019 – Present

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

LANGUAGES
- Korean: Native
- English: Fluent
- Hanja : Lv-3 (Korea Association for the Promotion of Hanja Edu.)

SKILLS
- 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

Game Review Dashboard Implementation with NLP Sentimental Analysis   May 2023 –Jun 2023
- **[Award]** Grand Prize from InsightCON, 2023 Spring INSIGHT Projects Competition
- **[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
- **[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
- **[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

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

- **JAMES DYSON AWARD 2022 - Nat'l, Korea**, James Dyson Foundation
  - Winner (TOP 3), International Competetion — Jul 2022
- **PIN UP Concept Design Award 2021**, KAID
  - 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
  - Excellence Prize at Futures' League — Dec 2021
- **Challenge K-Startup Expo : Collegiate Competition**
 Ministry of SMEs and Startups,
 Korean Institute of Startup & Entrepreneurship Developement
  - Top 10, Offline Exhibition — Oct 2021
  - Top 50, Offline Exhibition — Aug 2019
- **Social Challenge alpha 7**, OhMyCompany, BSS, LISCC
  - Challenge Award, Crowd Funding (Funded 1,424,000 KRW) Sep 2020 – Dec 2020
- **Ulsan Collegiate Startup Excellent Idea Contest**
 Ulsan Creative Econ. & Innov. Center
  - Winner : Grand Prize — Nov 2020
- **Institute of Science & Technology Startups Competition**
 KAIST, GIST, DGIST, UNIST, POSTECH
  - Representative of UNIST (Top 2 at UNIST) — Dec 2020
  - Representative of UNIST (Top 3 at UNIST) — Nov 2019

FUNDINGS & SUPPORT PROGRAM

- **DIDIMDOL First Step - Startup Growth Development Project**,
 Ministry of SMEs and Startups,
  - 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
  - Most Funded Startup Company (100,000,000 KRW)
  - Excellent Completion at Pre-School

       ▫ 'Pre-School' Completion of Excellence & Youth Startup Academy   Nov 2020 – Nov 2021

- **UNIST UNIcorn Start-Up Support Program**, UNIST
  - ▫ Funding (12,000,000 KRW)
  - ▫ Participated for Four Semesters   Sep 2019 – Feb 2021
- **KISED Pre-Startup Package (General Field)**,
  Korea Institute of Startup & Entrepreneurship Development
  - ▫ Most Funded (70,000,000 Won)   Apr 2020– Dec 2020

ACTIVITIES

- **Ulsan Knowledge-Technology Startup Center**, Ulsan Technopark   Oct 2020
- **Patent IP Training Education**, Intellectual Property Office   Jun 2020 – Dec 2020
- **K-Camp Busan**, Krypton   Nov 2019 – May 2020

MEDIAS

- **UNIST Startup OCONNECT wins at JAMES DYSON AWARD 2022**,
  UNIST Press, CHOSUN Ilbo, Segye Ilbo, Sisa-news, Newsis   Feb 2022
- **UNIST 2021 Innopolis Performance Presentation**,
  UNIST Press, UlsanDaily, ETNews   Feb 2022
- **UNIST UNISPARK for Young Entrepreneurs** UNIST Magazine 2021 Winter Dec 2021
- **Southeast Venture Competition held by UNIST Lab Startup Innovation Group**
  The Korea Economy TV   Dec 2021
- **"New evolution of electrical outlets..." OneStep is released**
  The Korea Economic Daily   Dec 2021
- **"Make a 'National Outlet' which 'Connects' warmth to each other"**
  UNIST Magazine 2021 Spring   Feb 2021
- **"Doing businesses regardless of COVID-19" - Leap forward with technology**
  SBS, UBC   Feb 2021

PATENTS

- **Patent Registration**

- **Patent Application**
  - ▫ **Design Registration Application**, H. J. Bang(2021)

- **International PCT Application**

- **Trademark Application**