Kyu-Hwan Shim

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INTERESTS	Deep Learning, Application of Language Model	
WORK EXPERIENCE	**Machine Learning Engineer Intern, Nota AI** Seoul, Korea	Mar 2023 – Present

WORK EXPERIENCE

Machine Learning Engineer Intern, Nota AI Seoul, Korea — Mar 2023 – Present
- Intelligent Traffic System AI Model Development Team
- Develop Vision-based AI models - based on Object Segmentation and its applications

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 & SCHOLARSHIPS

Grand Prize (Runner-up), NIA, Minister of Science & Technology
- '22 BIGCONTEST Data Analytics Innovation League 2022 Grand Prize (Runner-Up)
  - Nat'l Information Society Agency (NIA) President Award
- **[PPT] [PRJ]** Carbon Footprint Calculator & Eco-friendly JEJU travel route RecSys. — 2022

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

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

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 — Jan 2023- Present
INSIGHT: Data Analyst, Business School of Sogang U. — Sep 2022- Jun 2023
Round 1, Google Code Jam — Jul 2021

Co-Founder, Chief Design Officer, Programmer, OCONNECT
- Main Designer & Operating Officer
- Assist developing ONESTEP, an easy-insert socket — Feb 2021- Present

Google Machine Learning Bootcamp, Google Korea
- Coursera Deep Learning Specialization, Certificate in Tensorflow Developers
- Kaggle Data Analysis Competition, Online Webinar & Meetings — Sep 2021- Dec 2021

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

OCONNECT

http://oconnect.kr

ONE STEP, an easy to plug in outlet

REP.	CEO **Hyeong-Jun Bang**
MEMBERS	CTO **Jinseo Park** CDO **Kyu-Hwan Shim** CMO **Sohee Shin**
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   OCONNECT holds total 18 patents.

- **Patent Registration**, total 1
- **Patent Application** total 5
- **Utility Patent** total 2
- **Design Registration Application** total 3
- **International PCT Application**, total 1
- **Trademark Application**, total 6

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

SKILLS
- ML Framework: PyTorch, TensorFlow /
- Programming Language: C/C++, Python (Intermediate)
  - Verilog, MATLAB, Assembly Language, LaTeX (Novice)

PROJECTS

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, Hyenah 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
  - Command in stock.txt : '[Stock ID] [Stock Count] [Stock Price]'
  - Command Used for Sale :'[Buy/Sell] [Stock ID] [Stock Count]'
- After command exit() from the server, update stock.txt file with the rewritten stock status

MEDIA

DAVENGERS wins '22 BIGCONTEST Data Analytics Innovation League, Sogang People Dec 2022
UNIST venture 'OCONNECT' wins James Dyson Awards 2022, UNIST Press   Sep 2022