Kyuhwan Shim

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Institute of Computer Technology, 1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea

EDUCATION

Seoul National University, Biointelligence Lab, Seoul, Korea
- Master's Student @ Graduate School of AI — Sep 2024 – Presents

Sogang University, Seoul, Korea
- Bachelor's Degree in Computer Science — Mar 2019 – Aug 2024

Chungnam Science High School, Chungnam, Korea — Mar 2016 – Feb 2019

PUBLICATIONS

JOURNALS

[J1] Geon Choi*, Ganghun Kim*, Hyunjae Kim*, Kyuhwan Shim*, and Myoungwan Koo†,
"KIRINO : An Interactive Chatbot System for User Persona", *Korea Computer Congress*,
🏆 Excellence Paper Award — Jun 2024.

RESEARCH EXPERIENCE

Autonomous Intelligent Systems Group, Universität Bonn, Deutcheland
Visiting Student Researcher — Jul 2024 – Aug 2024

Biointelligence Lab, Seoul Nat'l University
Undergraduate Student Researcher — Dec 2023 – Aug 2024

Lee Lab, Graduate School of Data Science, Seoul Nat'l University
Mentee of ExploreCSR Program (with Google Research) — Dec 2023 – Feb 2024

WORK EXPERIENCE

Team Tidyboy-DSPL Seoul, Korea — Mar 2024 – Aug 2024
- **[Vision Language]** Developed Vision-based Pipeline based on YOLOv10 and CLIP for real-time environment understanding for Toyota-HSR

Machine Learning Engineer Intern, Nota Inc. Seoul, Korea — Mar 2023 – Aug 2023
- **[Vision]** Developed Vision-based Pipeline Models for Intelligent Traffic System on Edge Device
- **[DataOps & MLOps]** Construct Datalake and ML Pipeline on AWS and GCP

Co-Founder, OCONNECT Ulsan, Korea — Jun 2020 – Feb 2023
- Student Venture which makes Easy-Insert Socket, OneStep (CEO Hyeong-Jun Bang) **[R&D Didimdol]**
- **[Achievement]** Winner @ James Dyson Award '22 KR, Ulsan Collegiate Startup Competition

Yeongdong Firestation, Yeongdong, Chungbuk, Korea
- Military Duty as a Korean Conscripted Firefighters — Aug 2020 – Apr 2022

AWARDS &ACTIVITIES

Finalist (Top 3), Robocup2024 @ Eindhoven
- 🏆 Finalist in the Robobocup@Home DSPL League — Aug 2024

Runner-Up (2nd Place), Graduate School of Data Science @ Seoul Nat'l University — 2024

Top 30, Samsung Advanced Institute of Technology, DACON
- [Samsung AI Challenge] Camera-Invariant Domain Adaptation Challenge
- Domain Adaptive Segmentation Algorithm Robust to Camera Changes (with SePiCo)
- 🏆 Joined Talent pool of Samsung Electronics — Sep 2023

Finalist (Top 30), LG AI Research & DACON
- Smart Factory Product Quality Status Classification on LG Aimers
- 🏆 Phase-3 Online Hackathon Finalist, Phase-2 3% for Entire Pool (891) — Jan 2023- Mar 2023

Grand Prize (1st Place, Mayor of Gangseo-gu Office), Gangseo-gu Office
- **[PPT]** Risk Rating Model for Small Business Owners using the Credit Rating Model — 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	**SNU AI Fellowship**, Seoul Nat'l University	2024 Fall - 2026 Summer

SCHOLARSHIPS **SNU AI Fellowship**, Seoul Nat'l University   2024 Fall - 2026 Summer
Sogang University Alumni Scholarship, Sogang University Alumni Association
- Scholarship for General (2020), Startup Talents (2022)
- Priest Villarreal Memorial Scholarship (2023-2024) **[Awarded from SMILEGATE CEO]**
Albatross Scholarship, Sogang University **[talents in SW Fields]**   2019

CERTIFICATES **Certificate in Tensorflow Developers**, Tensorflow Certificate Program   Oct 2021 – Oct 2024
Advanced Data Analytics Semi-Professional, Korea Data Agency   Apr 2021
ITQ (MS Office) & **GTQ (Photoshop)**   Oct 2011

MEDIA **Excellence Paper Award in the Undergraduate Division at KCC 2024**, Sogang People   Jun 2024
'Nunettine' wins Grand Prize at Gangseo-gu Big Data Contest, Sogang People   May 2023
'DAVENGERS' wins BIGCONTEST Data Analytics Innovation League, Sogang People   Dec 2022
UNIST venture 'OCONNECT' wins James Dyson Awards 2022, UNIST Press   Sep 2022

SPEECH
- **[PDF] Seminar** Samsung DACON Challenge - Domain Adaptation @ Release(Sogang CS) Dec 2023
- **[PDF] Seminar** Dive into YOLOv8 @ Nota Inc.   Mar 2023
- **[PDF] Undergraduate Speech** at Carbon Neutral Workshop @ Shinhan Card & World Bank   2023

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

PROJECTS **Samsung AI Challenge - Camera Invariant Domain Adaptation**   Sep 2023 –Oct 2023
- **[PPT]** Domain Adaptation for Fisheyed 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
- **[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, Moonil Yang

Eco-friendly travel route RecSys in Jeju Island   Sep 2022 – Oct 2022
- **[Link] [Award] [PPT]** Nat'l Information Society Agency (NIA) President Award
- **[My Job]** Prototype Design with Streamlit & 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

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**