SEONWOO KIM

INTEREST

Data mining, Computational Biology, AI

EDUCATION

Sungkyunkwan University *Mar. 2020 - Aug. 2023*
Bachelor of Science in Electronic and Electrical Engineering *Seoul, South Korea*
Total GPA of 4.13/4.5 (96.3/100) , **Magna Cum Laude (With Great Praise)**

Nanyang Technological University *Aug. 2022 - Dec. 2022*
Exchange Student *Nanyang, Singapore*

AWARDS AND SCHOLARSHIPS

Best Capstone Design, Sungkyunkwan University, awarded to autonomous driving IoT devices, 2023
Seoam Yoon Se Young Scholarship, SBS foundation, fully supported university scholarship students by covering their entire tuition fees, 2020-2023
National Scholarship, Korea Student Aid Foundation, 2020-2023
Dean's List, Sungkyunkwan University, 2020, 2023
National Work-Study Scholarship, Korea Student Aid Foundation, 2020-2021
Student Success Scholarship, Sungkyunkwan University, 2020-2022
Recommendation Scholarship, Sungkyunkwan University, 2021

JOB EXPERIENCES

Samsung Electronics, Suwon, South Korea *Aug. 2023 - present*
Full-time, Engineer(Software Developer)
Joined Network System Solution Team, Development of the Samsung SW test automation tool
•Developed scripts or programs that automatically perform tasks such as data processing, workflow management, file, and document management
•Created tools that allow the visual design and execution of business processes.
•Developed the chat bot to handle repetitive questions or perform simple tasks within the workflow.
•Deployed the system that automatically report and visualize the results
•Researched generative AI cases to overcome the lack of test cases problem

LG Energy Solution, Seoul, South Korea *Jul. 2023*
Intern, Software Developer
Joined Machine Vision Team, Responsible for Manufacturing Intelligent Algorithm
•Focused on exploring how deep learning algorithms can be effectively applied to enhance the efficiency of environmentally friendly electric vehicle battery production
•Developed intelligent algorithms by collecting and analyzing image data from electric vehicle batteries
•Utilized machine learning and image processing algorithms, extracted insights from production data, and implemented predictive models and optimization algorithms
•Analyzed diverse data, including sensor data, production volume, and quality, from the electric vehicle battery manufacturing process in Wroclaw, Poland

Top Engineering, Seongnam, South Korea *Jan. 2023 - Feb. 2023*
Intern, Software Developer
Joined the Deep Learning Research Team
•Research on Non-uniformity Correction Algorithm
•Adapted multiscale image contrast amplification(MUSICA) algorithms into semiconductor devices

•Developed a new algorithm for Recursive Algorithms for Bias and Gain Non-uniformity Correction, analyzing related papers
•Explored the effect of removing bad pixels in calibration-based methods
•Labeled PCB circuit boards and trained a model using YOLO v3-v7

Seoul Convergence Science Education Institute, Seoul, South Korea *Jun. 2021 - Aug. 2021*
Physics Teacher Training Assistant
•Provided seminars and national science education industry training support for high school physics teachers
•Assisted in conducting test experiments and preparing demonstration experiments for high school physics teachers
•Supported the creation of materials for physics seminars

PROJECTS

Sensing Design for Vehicular Sensor Networks, Sungkyunkwan University
Jan. 2023 - Feb. 2023 *Suwon, South Korea*
•Addressed the design of sensing in vehicular sensor networks and proposed a method to capture the freshness of status updates by leveraging a complex real-world traffic simulation using SUMO
•Applied a reinforcement learning method to minimize the average age of information, adapting to the dynamic environment

RESEARCH EXPERIENCE

ICS Laboratory, Sungkyunkwan University *Mar. 2023 - Jun. 2023*
Research Intern (Advisor: Professor Jemin Lee) *Suwon, South Korea*
•Learned how AI can directly applied to various networks situations
•Studied Semantic Communication in the Era of Generative AI

TEACHINGS

Calculus 2, Sungkyunkwan University *Aug. 2020 - Dec. 2020*
Teaching Assistant for Students with Disabilities *Suwon, South Korea*
•Tutored Calculus2 for Computer Science Major Students with Autism Spectrum in English

General Chemistry 1, Sungkyunkwan University *Mar. 2021 - Jun. 2021*
Teaching Assistant for Students with Disabilities *Suwon, South Korea*
•Tutored for General Chemistry 2 for Electrical Engineering Major deaf students in English

SKILLS

Software Frameworks
TILDE(Samsung's proprietary framework), Robot Framework
Languages
Advanced: C/C++, HTML, CSS, JavaScript, Python
Moderate: AssemblyLanguage(X86-64), C#, Verilog HDL, VHDL

VOLUNTEER EXPERIENCE

High school students mentoring, Dankook University Software High School *Sep. 2020 - Dec. 2020*
•Tutored basic mathematics and c programming for low-income students *Seoul, South Korea*