

CHAE LIN KIM

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PERSONAL PROFILE

My primary research area is deep learning-based computer vision and I have extensive experience in deep learning-based computer vision research with institutions in both Korea and USA.

I am a hardworking and ambitious individual that I continually studying and researching. Currently, I am working as a researcher in Taea AI Industry Promotion Agency.

EDUCATION

Sookmyung Women's University <i>Master of Engineering in IT Engineering</i> <ul style="list-style-type: none">Advisor: Professor Byung-Gyu Kim	Seoul, Korea <i>Sep. 2021 – Aug. 2023</i>
Sookmyung Women's University <i>Bachelor of Engineering in IT Engineering(Magna Cum Laude)</i>	Seoul, Korea <i>Mar. 2016 – Aug. 2021</i>

RESEARCH EXPERIENCE

Taea AI Industry Promotion Agency (TAIPA) <i>Research and Development of Artificial Intelligence Models in the Healthcare Sector</i> <ul style="list-style-type: none">Conducted gait analysis to identify correlations between walking patterns and diseases, focusing on developing AI-driven solutions for health issues prevalent in Taea County's elderly community.	Chungcheongnam-do, Republic of Korea <i>Nov. 2023 – present</i>
The University of Akron <i>Exchange Research Intern</i> <ul style="list-style-type: none">Applied deep learning algorithms to electrocardiogram classification.	Ohio, US <i>July. 2022 – Aug. 2022</i>
Sookmyung Women's University <i>Development of deep Learning based vision inspection system for bamboo toothbrush.</i> <ul style="list-style-type: none">Proposed a deep learning-based fault detection model by improved Mask-RCNN with attention on FPN for manufacturing automation.Developed real-time parallel processing for a deep learning-based vision inspection system for the factory automation.	Seoul, Republic of Korea <i>Sep. 2021 – Aug. 2023</i>
<i>Evaluation of Speech Recognition on Foreign Language Education Services in Online Video Platform Environment</i> <ul style="list-style-type: none">Developed multi-modal model with vision and audio for Speech Recognition on Foreign Language Education Services.Designed lip syncing video from side face video using Rotation-and-Render and Wav2Lip model on Lip Reading task to solve the problem of difficulties on lip reading with side lips.	
<i>Few-shot learning for Facial Expression Recognition</i> <ul style="list-style-type: none">Propose channel selection module to select optimal channel features from support set and shows enhanced generalization performanceExploit spatial information from facial images and construct those additional data as support and query and shows generalization performance for each emotion category	

JOURNAL PAPERS

International Journal

- Facial Expression Recognition with few-shot learning : A comprehensive survey, **Chae-Lin Kim(First)**, Byung-Gyu Kim*, Journal of Real-Time Image Processing (Springer Nature) April 2023
- Efficient Few-shot Learning based on Channel Selective Relation Network for Facial Expression Recognition, **Chae-Lin Kim(First)**, Jiwoo Kang, Byung-Gyu Kim* (submitted on IEEE Signal Processing Letters on Dec 2023)

CONFERENCE PAPERS

International Conference

1. Recent Trend for Monocular Depth Estimation Based on Deep Learning, Ye-Ji Kim, **Chae-Lin Kim**, Han-Lim Lee and Byung-Gyu Kim*, International Conference on Multimedia Information Technology and Applications (MITA)

Korean Conference

1. Integrated System for Facial Alignment and Lip Generation, Han-lim Lee, **Chae-Lin Kim**, Byung-Gyu Kim*, and Kwang-Ho Kim, Spring Conference (KMMS) 2023
2. A Study of the Fault Detectifon Technique for the Bamboo Toothbrush Manufacturing Automation, **Chae Lin Kim(First)**, Young-Ju Choi, Byung-Gyu Kim*, Eun-Ha Park, Kyung-Tae Lee, Autumn Conference (KMMS) 2022
3. Development of Real-time Dangerous Situation Detection Algorithm Based on Object Detection and Depth Information Fusion, **Chae Lin Kim(First)**, Jeong-Been Seo, Byung-Gyu Kim*, Spring Conference (KMMS) 2021

HONORS AND AWARDS

2nd place Award, DNA+ Drone Challenge, ETRI(Electronics and Telecommunications Research Institute)	2022
Graduation with honors: magna cum laude, Sookmyung Women's University	2021
Best honors Award, Sookmyung Women's University	2021
High honors Award, Sookmyung Women's University	2017, 2020
1st Place Award, Java Hackathon in Jeju CCEI	2019
2nd place Award, Appjam in SOPT	2020
Undergraduate Research Scholarship, Sookmyung Women's University	2021

TEACHING EXPERIENCE

Sookmyung Women's University <i>Teaching Assistant</i>	Seoul, Republic of Korea
Image Processing and its Applicatons	March. 2022 – June. 2022
<ul style="list-style-type: none">• Assist and teach MFC window programming with C language using Visual Studio• Answered questions in person and online, marked assignments, and proctored exams for 30+ students	
Operating Systems Principles	Sep. 2022 – Dec. 2022
<ul style="list-style-type: none">• Assisted and helped examination paper creation about Operating Systems• Answered questions in online, marked assignments and tests, and proctored exams for 280+ students	

PROGRAMMING EXPERIENCE

Java Programming Education in Jeju CCEI	Jeju Island, Korea
<i>Member of program</i>	<i>July. 2019 – Aug. 2019</i>
<ul style="list-style-type: none">• Designed a location based game application to solve social problems in Jeju island	
(SMWU-KSU Interdisciplinary) Hackathon with AWS Educate	Seoul, Korea
<i>Member of program</i>	<i>Feb. 2020</i>
<ul style="list-style-type: none">• Proposed deep learning-based app service using text and vibration to alert dangerous situation for auditory disordered people	
University student programming union club (SOPT)	Seoul, Korea
<i>Server Engineer</i>	<i>Sep. 2019 – Dec. 2019</i>
<ul style="list-style-type: none">• Designed an application service of vintage shopping mall as a server engineer and managed its database	

EXTRACURRICULAR ACTIVITIES

Graduate Student Council

Seoul, Korea

Student President

March. 2022 - March. 2023

- Hosted meetings and conferences for professors and graduate students

ACE(AI Challengers Ensemble)

Seoul, Korea

Leader

Sep. 2021 - March. 2023

- Participated on various AI challenges and hackathons and researched trendy machine learning algorithms

Sookmyung Unesco-Unitwin ICT education program

Phnom Penh, Cambodia

Student Assistant, Volunteer

Aug. 2020

- Assisted Arduino and mobile application programming course and managed student hackathon project

Sookmyung University Major Mentor Program (SUMM)

Seoul, Korea

IT Engineering Mentor

Sep. 2019 – Feb. 2021

- Delivered an introduction of IT Engineering lecture once a month and mentored high school students hoping to major in IT Engineering

TECHNICAL SKILLS

Languages: Python (TensorFlow, Pytorch), HTML/CSS, JavaScript

Developer Tools: Git, Amazon Web Services, Google Cloud Platform, VS Code, Visual Studio

Database: MySQL