

CHAE-LIN KIM

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🔗 <https://chaelin0722.github.io/introduction/>

PERSONAL PROFILE

I am currently pursuing a Ph.D. in Computer Science at Tulane University, where I focus on AI-based assistive technology. My research interests include deep learning networks, particularly in the field of Human-Computer Interaction (HCI) and computer vision. I am passionate about developing technologies that enhance the quality of life.

EDUCATION

Tulane University

PhD program in Computer Science

- Advisor: Professor Saad Hassan

LA, United States

Aug. 2024 – present

Sookmyung Women's University

Master of Engineering in IT Engineering

Seoul, Korea

Sep. 2021 – Aug. 2023

Sookmyung Women's University

Bachelor of Engineering in IT Engineering (Magna Cum Laude)

Seoul, Korea

Mar. 2016 – Aug. 2021

RESEARCH EXPERIENCE

Taeon AI Industry Promotion Agency (TAIIPA)

Research and Development of Artificial Intelligence Models in the Healthcare Sector

Chungcheongnam-do, Republic of Korea

Nov. 2023 – Mar. 2024

- Conducted gait analysis to identify correlations between walking patterns and diseases, focusing on developing AI-driven solutions for health issues prevalent in Taeon County's elderly community.

The University of Akron

Exchange Research Intern

Ohio, US

July. 2022 – Aug. 2022

- Applied deep learning algorithms to electrocardiogram classification.

Sookmyung Women's University

Development of deep Learning based vision inspection system for bamboo toothbrush

Seoul, Republic of Korea

Sep. 2021 – Aug. 2023

- 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.

Evaluation of Speech Recognition on Foreign Language Education Services in Online Video Platform Environment

- 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.

Few-shot learning for Facial Expression Recognition

- Propose channel selection module to select optimal channel features from support set and shows enhanced generalization performance
- Exploit 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

1. 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) May 2023

CONFERENCE PAPERS

International Conference

1. Channel Selective Relation Network for Efficient Few-shot Facial Expression Recognition, **Chae-Lin Kim(First)**, Ga-Eun Lee, Jiwoo Kang, Byung-Gyu Kim* IEEE International Conference on Consumer Electronics (ICCE) 2024
2. 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	

EXTRACURRICULAR ACTIVITIES

Graduate Student Council	Seoul, Korea
<i>Student President</i>	March. 2022 - March. 2023
<ul style="list-style-type: none">• Hosted meetings and conferences for professors and graduate students	
Sookmyung Unesco-Unitwin ICT education program	Phnom Penh, Cambodia
<i>Student Assistant, Volunteer</i>	Aug. 2020
<ul style="list-style-type: none">• Assisted Arduino and mobile application programming course and managed student hackathon project	
Sookmyung University Major Mentor Program (SUMM)	Seoul, Korea
<i>IT Engineering Mentor</i>	Sep. 2019 – Feb. 2021
<ul style="list-style-type: none">• Delivered an introduction of IT Engineering lecture once a month and mentored high school students hoping to major in IT Engineering	

PROGRAMMING EXPERIENCE

Java Programming Education in Jeju CCEI

Member of program

Jeju Island, Korea

July. 2019 – Aug. 2019

- Designed a location based game application to solve social problems in Jeju island

(SMWU-KSU Interdisciplinary) Hackathon with AWS Educate

Member of program

Seoul, Korea

Feb. 2020

- Proposed deep learning-based app service using text and vibration to alert dangerous situation for auditory disordered people

University student programming union club (SOPT)

Server Engineer

Seoul, Korea

Sep. 2019 – Dec. 2019

- Designed an application service of vintage shopping mall as a server engineer and managed its database

TECHNICAL SKILLS

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

Developer Tools: Git, Amazon Web Services, VS Code

Database: MySQL