

CHAE LIN KIM

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PERSONAL PROFILE

I'm a computer science researcher with a focus on deep learning in facial expression recognition with few-shot learning. I have extensive experience in deep learning and AI research with institutions in both Korea and USA, I have presented my research in various conferences.

I am a hardworking and ambitious individual, I am a self-starter and I am highly motivated with a great passion in the field of computer vision and machine learning.

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 (expected)</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

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>Graduate Researcher</i> <ul style="list-style-type: none">Conducted surveys for facial expression recognition and meta-learning with a focus on few-shot learningApplied few-shot learning on FER task to solve the overfitting problem of facial expression datasetsProposed a deep learning-based fault detection model by improved Mask-RCNN with attention on FPN for manufacturing automationDeveloped real-time algorithm for a deep learning-based vision inspection system for a bamboo toothbrushDeveloped matching technology based on context information analysis for expanding the market of online publicationsApplied facial alignment algorithm using GAN on Lip Reading task to solve problem of difficulties on lip reading with side lipsDeveloped multi-modal model with vision and audio for Speech Recognition on Foreign Language Education ServicesCurrently in process of conducting more research on generalization with raw and few datasets	Seoul, Republic of Korea <i>Sep. 2021 – Present</i>
Sookmyung Women's University <i>Research Intern</i> <ul style="list-style-type: none">Researched identifying valuable features of context information to infer similar types of publicationsProposed a fusion algorithm of object detection and depth information for detecting dangerous situations in real-timeConducted surveys for recent classification and detection of state-of-the-art models and implemented architectures	Seoul, Republic of Korea <i>Mar. 2021 – Aug. 2021</i>

JOURNAL PAPERS

International Journal

- Facial Expression Recognition with few-shot learning : A survey, **Chae-Lin Kim(First)**, Byung-Gyu Kim*, International Journal of Human-Computer Interaction (submitted on Dec 2022)
- Improved Mask-RCNN with attention on FPN features(Journal title not yet decided), **Chae-Lin Kim(First)**, Ye-ji Kim, Byung-Gyu Kim* (preparation Dec 2022)
- Improved few shot learning algorithm for FER(Journal title not yet decided), **Chae-Lin Kim(First)**, Byung-Gyu Kim* (preparation dissertation Aug 2023)

CONFERENCE PAPERS

International Conference

- 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

- 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, KMMS Autumn Conference (KMMS)
- 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*, KMMS Spring Conference (KMMS)

CONFERENCE PRESENTATIONS

Korea Multimedia Society (KMMS) Autumn Conference 2021

Nov. 26, 2021

Poster presentation

Online, Republic of Korea

- Title: A Study of the Fault Detection Technique for the Bamboo Toothbrush Manufacturing Automation

Korea Multimedia Society (KMMS) Spring Conference 2021

April. 30, 2021

Poster presentation

Online, Republic of Korea

- Title: Development of Real-time Dangerous Situation Detection Algorithm Based on Object Detection and Depth Information Fusion

TEACHING EXPERIENCE

Sookmyung Women's University | *Teaching Assistant*

Seoul, Republic of Korea

Image Processing and its Applicatons

March. 2022 – June. 2022

- 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

- Assisted and helped examination paper creation about Operating Systems
- Answered questions in online, marked assignments and tests, and proctored exams for 280+ students

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

PROGRAMMING EXPERIENCE

Java Programming Education in Jeju CCEI

Jeju Island, Korea

Member of program

July. 2019 – Aug. 2019

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

(SMWU-KSU Interdisciplinary) Hackathon with AWS Educate

Seoul, Korea

Member of program

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)

Seoul, Korea

Server Engineer

Sep. 2019 – Dec. 2019

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

EXTRACURRICULAR ACTIVITIES

Graduate Student Council

Student President

Seoul, Korea

March. 2022 - March. 2023

- Hosted meetings and conferences for professors and graduate students

ACE(AI Challengers Ensemble)

Leader

Seoul, Korea

Sep. 2021 - March. 2023

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

Sookmyung Unesco-Unitwin ICT education program

Student Assistant, Volunteer

Phnom Penh, Cambodia

Aug. 2020

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

Sookmyung University Major Mentor Program (SUMM)

IT Engineering Mentor

Seoul, Korea

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), C/C++, Java, HTML/CSS, JavaScript

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

Database: MySQL