Seayul **Choi**

Junior Student @ KAIST

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Summary

A passionate Junior Student at KAIST dedicated to gaining a variety of experience in various fields. I have been involved in research since high school and continue to expand my research experience at KAIST. I am currently conducting an individual study (undergraduate research) in KAIST NMAIL(Neuro-Machine Augmented Intelligence Lab), and I am interested in improving human life using biosignals and deep learning models. I also have experience in founding a startup and have worked as a core front-end developer. In addition, I have experience in the field of hacking and cybersecurity.

Education

KAIST(Korea Advanced Institute of Science and Technology) — *Daejeon, S.Korea*

Junior, School of Computing, Department of Brain and Cognitive Science (Double Major) — *Feb. 2023 - PRESENT*

- GPA: 4.06/4.3, with 70 credits completed
- Relevant Coursework: CS.20300 System Programming (A+), BCS.20002 Systems Neuroscience (A+), MAS.10010 Linear Algebra for Data Science (A+), CS.30706 Machine Learning (A0), CS.20004 Discrete Mathematics (A0), CS.20006 Data Structure (A0), BCS.20001 Biology of Neurons (A0)

Hansung Science High School — *Seoul, S.Korea*

Early Graduation — *Mar. 2021 - Feb. 2023*

Research Experience

Individual Study — *Daejeon, S.Korea*

KAIST, NMAIL(Neuro-Machine Augmented Intelligence Lab) — *Sep. 2024 - PRESENT*

- In order to prepare research about application of deep learning model to biosignals, studied methodlogies for processing and analyzing biosignals such as EEG and PPG
- Contributed to project about developing model that predicts blood pressure using only PPG signal
- Developed mobile and smartwatch applications used in the experiment

Development of a Public Key Cryptography based on Cubic Function — *Seoul, S.Korea*

Hansung Science High School — *Mar. 2022 - Jul. 2022*

- Proposed new type of cryptography system based on cubic function inspired from elliptic curve cryptography
- Best Paper Award, Hansung Science High School, 2022 Spring

Comparison of A* Algorithm Performance in the Road Network in Seoul according to the p-value of the heuristic function defined by Minkowski Distance — *Seoul, S.Korea*

Hansung Science High School — *Aug. 2021 - Dec. 2021*

- Study about the performance of A* algorithm depending on the heuristic function defined by Minkowski distance
- Best Paper Award, Hansung Science High School, 2021 Fall

Skills

Language : C, C++, Python, Java, Dart, R, JavaScript,
Framework: Flutter, Android Studio, Next.js

Extracurricular Activity

DADA Company — *Seoul, S.Korea*

Co-Founder, Front-end Developer — *Jul.2023 - Mar.2024*

- Co-founded a startup with colleagues
- Developed a table ordering application
- Worked as core front-end(Flutter) developer
- Although the product was not successful, the experience was priceless

Gombal (KAIST Handicraft Club) — *Daejeon, S.Korea*

Vice President at 2024 & Core member — *Sep.2023 - PRESENT*

- Hosted a handicraft exhibition and various club events
- Established the club's first official constitution and introduced a collaboration tool for club management

Humanity/Leadership III program <Introduction to Hacking> *Daejeon, S.Korea*

Lecturer *Feb.2025 - PRESENT*

- Teach about the basis of hacking to KAIST freshman

GoN (KAIST Cybersecurity Club) *Daejeon, S.Korea*

Core Member *Mar.2023 - PRESENT*

- Studied about the basis of cryptography, cybersecurity, hacking
- Participated in club CTF

Samsung Shining Star *Hwaseong, S.Korea*

Participant *Jul.2024*

- A program about semiconductor held by Samsung Electronics for sophomore students
- Played a key role in a team project about designing a future semiconductor product

Awards & Scholarship

Awards

2022 **Best Paper Award (1st Prize)**, Hansung Science High School *S.Korea*

2022 **Finalist**, Samsung Humantech Paper Award *S.Korea*

2021 **Best Paper Award (1st Prize)**, Hansung Science High School *S.Korea*

2018 **Finalist**, Edaily Coding Challenge *S.Korea*

Scholarship

2022 **Hanseong Nobel Gifted Scholarship**, Hanseong Son Jae Han Scholarship Foundation *S.Korea*