

## EDUCATION

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- **University of North Carolina Chapel Hill** NC, USA  
*Master of Science in Computer Science* 08/2024 - present
  - Coursework: Video Recognition, Image Processing and Analysis, Computer Organization
- **Chung-Ang University** Seoul, South Korea  
*Bachelor of Applied Statistics and French Literature; Summa Cum Laude* 03/2020 - 08/2023
  - Total GPA of 4.40 / 4.50 (98.86 / 100)
  - Coursework: Deep Learning for Image Data Analysis, Deep learning for AI, Data Structure, Algorithm, Data Mining
  - Honors: Department Secondary Honor Scholarship (2022), Specialized Academic Scholarship (2022), Department Secondary Honor Scholarship (2021), Department Honor Scholarship (2020)

## RESEARCH EXPERIENCE

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- **Data Driven EnviroLab** NC, USA  
*Research Assistant (Adviser: Professor Angel Hsu)* 08/2024 - 12/2024
  - Built and fine-tuned ChatNetZero using GPT model and Retrieval Augmented Generation (RAG) using LangChain to provide accurate, relevant information regarding climate policy
  - Embedded over 200 PDF and CSV documents into a FAISS Vector Database, enhancing retrieval efficiency by utilizing Python libraries including Pandas for data preprocessing
- **CAU ET Laboratory** Seoul, South Korea  
*Undergraduate Research Assistant (Adviser: Professor Ilyoup Kwak)* 03/2022 - 06/2023
  - **Gene Expression Value Prediction:** Preprocessed data and contributed building a novel Transformer model with TensorFlow to predict gene expression value using millions of DNA sequence data, achieving 3rd place among 100+ teams in Dream Challenge 2022; Co-authored the paper “A community effort to optimize sequence-based deep learning models of gene regulation” published in *Nature Biotechnology*; Co-authored the paper “Proformer: a hybrid macaron transformer model predicts expression values from promoter sequences” published in *BMC Bioinformatics*
  - **Sound Event Detection:** Participated in DCASE (Detection and Classification of Acoustic Scenes and Events) Task4 Sound Event Detection in 2023 and applied an attention network optimized for extracting frequency information and authored a technical report [\[pdf\]](#)
  - **Medical Data Analysis:** Performed multivariate logistic regression to identify significant factors affecting taste and olfactory abnormalities, as well as the discrepancies between patient’s subjective judgments and their objective test results
- **CAU Intelligent Multimodal Reasoning Lab** Seoul, South Korea  
*Undergraduate Research Assistant (Adviser: Professor Junyeong Kim)* 01/2023 - 06/2023
  - Conducted weekly paper reviews on mitigating bias in AI systems and participated in monthly seminars with the KAIST U-AIM laboratory

## RELEVANT EXPERIENCE

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- **Samsung Software Academy for Youth** Gwangju, South Korea  
*Developer* 07/2023 - 06/2024
  - **Programming:** Gained knowledge of Object-Oriented programming principles through in-depth learning and sharpened Java programming skills and acquired expertise in Data Structures and Algorithms
  - **Full-stack Web Development:** Developed proficiency in VueJS, SpringBoot framework, and MySQL by developing and deploying fully-functioning web applications including Code Oyssey [\[code\]](#), Kkiri-Kkiri [\[code\]](#), and Geulgeurim [\[code\]](#)
- **Chung-Ang University AI Club** Seoul, South Korea  
*Regular Member* 03/2022 - 08/2022
  - Gave presentations on state-of-the-art language models and their code implementations
  - Participated in study groups for Natural Language Processing and Data Science

- **Chung-Ang University Tutoring Program**

Seoul, South Korea

*Tutor*

04/2022 – 06/2022

- Taught international students majoring in French Literature, focusing on French grammar and expressions
- Recognized as the best team and tutor within the program

## SKILLS

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- **Languages:** English, French, Korean
- **Programming languages:** Python, R, Java, SQL, Matlab, HTML, CSS, Javascript
- **Frameworks:** Pytorch, TensorFlow, VueJS, SpringBoot

## REFERENCES

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- **Ilyoup Kwak**  
*Department of Applied Statistics at Chung-Ang University*
- **Junyeong Kim**  
*Department of Artificial Intelligence at Chung-Ang University*

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