

# Juhyun Lee

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## Education

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### Chung-Ang University

*Undergraduate Student*

March 2020 - August 2023  
Seoul, Korea

- Bachelor of French Literature and Applied Statistics
- 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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### CAU ET Laboratory

*Undergraduate Research Assistant (Adviser: Professor Ilyoup Kwak)*

March 2022 - June 2023

- Ranked 3rd place in Dream Challenge “Predicting gene expression using millions of promoter sequences” [code] and participated in RSGDream2022 conference
- Conducted data preprocessing, experiments with machine learning and deep learning models (from n-gram to transformer), and proposed a novel transformer model
- Co-authored preprint “Proformer: a hybrid macaron transformer model predicts expression values from promoter sequences”
- Participated in DCASE (Detection and Classification of Acoustic Scenes and Events) Task4 Sound Event Detection in 2023
- 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 (IMR) Laboratory

*Undergraduate Research Assistant (Adviser: Professor Junyeong Kim)*

January 2023 - June 2023

- Conducted weekly paper reviews on mitigating bias in AI systems and participated in monthly seminars with the KAIST U-AIM laboratory

## Projects

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### Whole Slide Image Classification

*Deep Learning for Image Data Analysis course (Instructor: Changwon Lim)*

September 2022 - December 2022

- Led a project on detecting stroke types from Whole Slide Image data using Multiple Instance Learning and the CLAM model
- Delivered an oral presentation and wrote a report

### Caricature Generation

*AI Developer*

July 2022 – Aug 2022

- Created a caricature generation website using React(Front-end), Django(Back-end), and StyleCariGAN and StyleCLIP(AI) models [code]
- Combined StyleCLIP and StyleCariGAN model to generate caricatures with different emotions

## Extracurricular Activities

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### SSAFY

*SAMSUNG SOFTWARE ACADEMY FOR YOUTH*

July 2023 - December 2023

- Gained knowledge of Object-Oriented programming principles through in-depth learning and practical application of Java
- Sharpened Java programming skills and acquired expertise in Data Structures and Algorithms
- Developed proficiency in VueJS, Spring framework, and MySQL

### Chung-Ang University AI Club

*Regular Member*

March 2022 - August 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

*Tutor*

- 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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**Programming Languages** Python, R, Java, MySQL, JavaScript

**Frameworks** Pytorch, TensorFlow, VueJS, Spring

**Language Proficiency** English (IBT TOEFL 108), Korean (Native), French (DELFB1)

## Reference

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**Ilyoup Kwak**

*Assistant Professor*

Department of Applied Statistics at Chung-Ang University

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**Changwon Lim**

*Professor*

Department of Applied Statistics at Chung-Ang University

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**Byeongchan Seong**

*Professor*

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**Junyeong Kim**

*Professor*

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