

# Jueon Kim

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## EDUCATION

<b>Sungkyunkwan University</b> , Seoul, South Korea	Expected Feb 2025
Bachelor of Science in Integrative Biotechnology & Computer science and Engineering & Bioinformatics	
GPA: 3.94/4.0	
Related Coursework: Genetics; Immunology; Organic chemistry; Biostatistics; Data Structure; R and Python; Statistics for machine learning	
<b>University of North Carolina Greensboro</b> , NC, United States	Jan 2024 - May 2024
Student exchange program	
GPA: 3.92/4.0	
Related Coursework: Principles of biology; Data computing and quantitative reasoning	
<b>Pukyong National University</b> , Busan, South Korea	Mar 2020 - Feb 2022
Bachelor of Science in Microbiology	
GPA: 3.45/4.0	
Transferred to Sungkyunkwan university in the junior year	

## RESEARCH EXPERIENCE

<b>Computational biomedicine lab</b> , Sungkyunkwan University	Jul 2024 - Present
<i>Undergraduate researcher</i> (advisor: Hoon Kim)	
- Implemented a Docker pipeline to automatically analyze single-cell multiomics data	
<b>Genome Editing Lab</b> , Sungkyunkwan University	Jul 2023 - Aug 2023
<i>Undergraduate researcher</i> (advisor: Huikwon Kim)	
- Executed high-throughput CRISPR screenings to build IscB library	
- Analyzed NGS genomic data in genomics for monitoring REC linker mutation status	
<b>Molecular Immunology Lab</b> , Sungkyunkwan University	Jan 2023 - Feb 2023
<i>Undergraduate researcher</i> (advisor: Jaeyoul Cho)	
- Conducted transfection of tagged NF-kB into HEK 293T cell	
- Tested anti-inflammatory effects of natural extracts through cell cytotoxicity	
<b>Neurodegeneration &amp; Extracellular vesicles Lab</b> , Sungkyunkwan University	Jun 2022 - Jan 2023
<i>Undergraduate researcher</i> (advisor: Donggyu Jo)	
- Visualized $\beta$ -amyloid plaques by immunohistochemistry(IHC) after excising mouse brains	
- Reviewed and presented newly published journals related to Alzheimer's disease	

## PROJECT EXPERIENCE

<b>Imaging of Amorphous Suspended Proteins Using LAFM and NeRF Deep Learning Model</b>	Feb 2023
Samsung Bioepis Idea Contest	
- Won 2 <sup>nd</sup> prize out of 141 teams	
- Identified limitations of existing methods used for imaging antibodies and plan strategy by deploying LAFM and NeRF deep learning model	
- Led presentation on feasibility and applicability	

<b>Machine Learning Model Development for Early Diagnosis of Alzheimer’s Disease</b>	
Sungkyunkwan university research contest	Nov 2022
- Yield AUC of 0.96 and 92% accuracy and received 2 <sup>nd</sup> prize - Led team of 4 to predict the presence of Alzheimer’s disease with RNA biomarker - Architected random forest algorithm to extract top 20 mRNA candidates based on feature attribution and Developed MLP classifier	

SKILLS

<b>Laboratory skills:</b>	
- Cell biology: Cell culture; Cytotoxicity assay; Cell imaging(Cytation5) - Molecular biology: PCR, qPCR, RT-PCR; Western and Southern blotting; ELISA; Spectrofluorometry; Genotyping; DNA cloning, synthesis, assembly; Mutagenesis; NGS preparation, NGS (bulk and single-cell sequencing) analysis; Transfection; Transformation; Transduction - Separation&Purifictaion: FACS; Chromatography; Immunoprecipitation; Spectrofluorometry - Animal testing: Mouse behavioral experiments; Brain sampling; Drug test	
<b>Programing languages:</b>	Proficient in Python, C, R; Intermediate in HTML, CSS, MATLAB
<b>Packages:</b>	Pandas, NumPy, Spicy, Polars, Scikit-learn, Matplotlib, Seaborn, PyTorch
<b>DevOps:</b>	Docker/Singularity; Git/GitHub; Linux, Shell script

CAMPUS & COMMUNITY INVOLVEMENT

<b>Academic club Lifeom</b>	Sep 2022 - Present
<i>Peer Tutor</i>	Sep 2024 - Present
- Taught mentees in Genetics	
<b>Department of biotechnology’s academic camp</b>	
<i>General affairs</i>	Jan 2023 - Apr 2023
<i>Program team</i>	Jul 2022 - Nov 2022

AWARDS AND SCHOLARSHIPS

<b>Academic Scholarship from Sungkyunkwan University</b>	Spring 2024
- Received 70% tuition fee for academic excellence (3%)	
<b>Corporate Scholarship from Mirae Asset</b>	Dec 2023
- Received \$5,500 for student exchange program	
<b>2<sup>nd</sup> prize, Samsung Bioepis idea contest</b>	Feb 2023
<b>Corporate Scholarship from seAH</b>	Oct 2022
- Received \$2,200 for the startup presentation	
<b>2<sup>nd</sup> prize, Sungkyunkwan university Research contest</b>	Nov 2022