

J I H Y E O N J E

Researcher | Student

PERSONAL PROFILE

As an independent student researcher, my research interests encompass all fields of biotechnology and biostatistics. Some of my past projects have been focused on machine learning based biological and medical data analysis.

EDUCATION

Duke University | Class of 2023
Biomedical Engineering and
Electrical Engineering, Pratt School
of Engineering
GPA: 3.8/4.0

WORK EXPERIENCE

2020 ~ Duke Woo Center for Big Data and Precision Health

2020 Woo Fellow | Undergraduate Researcher

- Working on developing an automatized feature extraction tool for the analysis of next-generation pathomic signatures of inflammation from renal biopsy data
- Abstract accepted at USCAP (United States and Canadian Academy of Pathology)

2017 ~ NCMIR (National Center for Microscopy and Imaging Research), Mark Ellisman Lab, 2020 San Diego, CA

Software Developer | Intern

- Worked on computational reconstruction and segmentation of electron microscope data, particularly involving brain and tissue scans
- Focus on developing DL-based image analysis tools and segmentation pipeline for feature extraction from large-scale biological data
- "CDeep3M-Preview: Online segmentation using the deep neural network model zoo" | 2020, paper under review

2018 ~ Wolfram Alpha

Student Ambassador | Researcher

- 2018 Wolfram Summer School Alumni
- Research focus on mathematical and computational analysis of the structure of viral capsids
- Worked on the Protein Database Data Importer Function (added in Mathematica functionality repository)

2019~ Duke University Caron Lab

2020 Intern

- Worked on 3D reconstruction and statistical analysis of dendritic spines from EM images

2015~ UNIST (Ulsan National Institute of Science and Technology), Protein Engineering Lab

2016 Intern

- Worked on developing a fusion nano probe using affibody molecules to target cancer

EXTRACURRICULAR

2020 ~ Duke iGEM (international Genetically Engineered Machine)

Undergraduate Researcher

2019 ~ Duke Undergraduate Machine Learning

Director of Sponsorship

- Organizing Duke Datathon, ML Day, and other related on-campus events.