

# HYUN JAE JEONG

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## RESEARCH INTERESTS

Deep learning & Digital Healthcare

Medical image analysis & Biomedical Signals

Diagnosis & Prognosis Medical Biomarkers

## EDUCATION

Korea University | Seoul, Republic of Korea

Mar 2018 -

Major in Biomedical Engineering

- Interdisciplinary major (2<sup>nd</sup> major) in Artificial Intelligence
- Relevant Coursework: Medical Imaging, Statistics, Mathematics, Machine Learning, and Programming

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## RESEARCH EXPERIENCES

Yonsei Severance Hospital. Center for Clinical Imaging Data Science Lab (Advisor: Hwiyoung Kim, PhD) | Seoul, Republic of Korea

Research Intern

Jan 2021 -

- Conducted research on radiomics for glioblastoma and metastasis in brain MRI, brain tumor segmentation, and the impact of image intensity normalization on radiomics model performance
- Collaborated with radiologists, medical physicists, and computer scientists. Participated as a co-author in peer-review journal
- Joined the Brain Research Funding Project: Auto-Segmentation Skull CT Image for Craniotomy, Normal CT Image-to-DE CT Image for resolution development

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## AWARDS & RECOGNITIONS

Representative of Korea University | England, Birmingham Universitas 21 RISE Competition

Korea Univ Team Leader

Oct 2020 – April 2021

- Conducted research on IBD(Inflammatory Bowel Disease) Blood Test Analysis, 3D MRI Image Analysis - Semifinal is Underway

University President Award (1<sup>st</sup> place award) | Korea Univ. Creative Challenge Program(CCP)

Data Scientist

Apr 2020 – Feb 2021

- Title : Alzheimer Monitoring Algorithm using by AI speaker
- Implemented MFCC, Wavelet Transform for analyse patients voice. Made Alzheimer prediction model using by deep learning

1<sup>st</sup> place award | CDTB Database Competition

Data Scientist

Aug 2020 – Feb 2021

- Title : Self Detection of Parkinson Disease System for Patients using by wearable devices
- Tabular Wearable Device Analysis & Parkinsons' Drawing CNN Analysis.

3<sup>rd</sup> place award | Campus CEO Startup Competition

Data Scientist

Oct 2020 – April 2021

- Co-founder of 'IBDecision', Made IBD patients care application 'BDCare' (Underway)

- Automated Food Detection - Object Detection, IBD blood test, Endoscope image analysis

## VOLUNTEERING

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<b>Pyeong Chang Winter Olympics</b>   IOC	Aug 2017 – Feb 2018
<ul style="list-style-type: none"> <li>• Pyeong Chang Winter Olympics Volunteer (Reporter Domitory)</li> <li>• Domitory &amp; Gangneung Olympic Park</li> </ul>	
<b>Director &amp; Lecturer</b>   academic club director (Coding Tigers)	Oct 2019 – Mar 2020
<ul style="list-style-type: none"> <li>• Coding Tigers Founder &amp; Leader of The club</li> <li>• Directed an academic club aimed at studying deep learning and programming</li> <li>• Taught Machine learning and python to junior and sophomores in BME</li> </ul>	
<b>Foreign Students Volunteer</b>   KU Korean Language Center	Feb 2020 – Mar 2020
<ul style="list-style-type: none"> <li>• Taught korean &amp; korean cultures to KU exchange students</li> </ul>	

## SKILLS

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### Language

- Korean
- English

### Programming

- Python 3.7
- Matlab
- ML/DL frameworks and libraries – Pytorch, Keras and other import libraries

### Typesetting Document & Wireframe

- MS office
- Adobe Premium (Illustrator, XD, Photoshop)

## ACADEMIC ACTIVITIES

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<b>Participants</b>   Koala Coding Circles Data, 1 <sup>st</sup> generation, Hackathon	Apr 2019 – Oct 2019
<b>Participants</b>   Michael J.Fox Foundation Online Parkinson' Seminar, USA	Oct 2020
<b>Participants</b>   Korea University BME AI academic club (KUBME-AI)	Apr 2019 – Oct 2019