

# Jiwoon Lee

[LinkedIn](#) | [GitHub](#) | [ResearchGate](#)

Location: Seoul, Korea

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## RESEARCH INTERESTS

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Computational Neuroscience, Medical AI, Generative AI, Signal Processing

## EXPERIENCE

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### Research Intern

*BCML (Bio Computing and Machine Learning) Lab., Kwangwoon University*  
Advisor: Prof. Cheolsoo Park

Jan 2022 – Present

On-site – Seoul, Korea

- Restoration and Interpolation method for Electrocardiogram using DDPM
- Multivariate Empirical Mode Decomposition
- Classification of arrhythmias via 1D-2D Transformation
- Text-To-Speech using Melspectrogram and Generative Adversarial Network
- Detection of abnormal walking using Machine Learning

### Research Intern

*Qualcomm Institute, University of California, San Diego*  
Advisor: Prof. Seokheon Cho

Jul 2022 – Aug 2022

On-site – San Diego, California, United States

- Analysis of disease classification model using LIME (Local Interpretable Model-agnostic Explanation) method
- Classification of breast tumors using Support Vector Machine

### Squad Leader, Sergeant

*Capital Defense Command, Republic of Korea Army*

Jun 2020 – Dec 2021

- Fire Direction Center (FDC)

## EDUCATION

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### Kwangwoon University

*Major in Information Engineering, Bachelor of Science in Computer Engineering*

Seoul, Korea

Feb 2019 – Present

## HONORS AND AWARDS

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Software Competence Excellence Scholarship, Kwangwoon University, 2019, 2022, 2023

**Best Paper Award**, 2022 IEEE ICCE-Asia 2022, IEEE, 2022

Excellence Award in Ministry of National Defense Start-Up Challenge, Republic of Korea Ministry of National Defense, 2021

Academic Excellence Scholarship, Kwangwoon University, 2019

Grand Prize in Chambit Design Semester Performance Presentation, Kwangwoon University, 2019

Microsoft Azure Prize in The 1st Welcome to the maker world, Microsoft Korea, 2017

## COMMUNICATIONS

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- J. Lee, C. Park, "Denoising Diffusion Probabilistic Model based Time-Series ECG data Interpolation", In *The Korean Society of Medical & Biological Engineering Autumn Conference 2022*, Nov 2022
- J. Lee, C. Park, "Restoration of Time-Series Medical Data with Diffusion Model", In *2022 IEEE International Conference on Consumer Electronics-Asia (ICCE-Asia)*, Oct 2022 [\[Link\]](#)
- S. Baek, S. Han, J. Lee, C. Park, "Arrhythmia Classification Using 1D-2D Conversion", In *u-Healthcare 2019*, Dec 2019

## CERTIFICATIONS

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- Introduction to Statistical Methods with MATLAB, MATLAB, Feb 2023
- Qualcomm Institute Artificial Intelligence (AI) Development Project, Qualcomm Institute, Aug 2022
- AI Framework Certificate(KNIME Certification: L1 Examination, KNIME, Aug 2022
- Principles of Supercomputer and Supercomputing, Korea Institute of Science and Technology Information, Nov 2016

## ORGANIZATIONS

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IEEE, Seoul Section	Sep 2022 – Present
IEEE Consumer Technology Society	Sep 2022 – Present