

# Heejoo Jin

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## EDUCATION

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**Georgia Institute of Technology**, Atlanta, Georgia | August 2017 - December 2021  
**Bachelor of Science in Computer Science** | GPA: 3.74 / 4.0

## SKILLS

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Java, Python  
PyTorch, Keras, OpenCV, Scikit-learn, Pandas  
HTML, CSS, SQL, Android Studio

## PROFESSIONAL EXPERIENCE

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**DEEPNOID**, Seoul, South Korea

October 2020 - December 2020

**Deep Learning Research Intern**

- Worked with National Cancer Center on developing a breast cancer histology image classification model with an accuracy of 99%.
- Assisted in optimizing a U-Net model for multi-class semantic segmentation of bone cyst MR images.
- Visualized class-activation heatmap for model explainability and the deployment of the model via REST API using Kafka & Flask.

**Samsung Electronics**, Suwon, South Korea

June 2020 - August 2020

**Software Engineer Intern**

- Designed a Bluetooth Low Energy (BLE) connectivity solution that covers edge cases of Galaxy Buds Automatic Sound Switching.
- Developed a Proof of Concept Android application for BLE connectivity with Galaxy Buds using Java & Android BLE API.

**WarnerMedia**, Atlanta, Georgia

January 2019 - May 2019

**Quality Assurance Analyst Intern**

- Debugged and tested mobile games and apps that reached 1,000,000+ users and documented defects in a concise manner on JIRA.
- Completed user research with children aged 8-12 with Cartoon Network Arcade app, resulting in an increase in user feedback by 7%.

## RESEARCH EXPERIENCE

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**Exoskeleton and Prosthetic Intelligent Controls (EPIC) Lab**, Georgia Tech

May 2019 - Present

**Machine Learning Undergraduate Researcher**

- Build various machine learning models for user gait variable estimation to optimize health monitoring and exoskeleton assistance control.
- Utilize Vicon motion capture system and biomechanical sensors to understand human-robot interaction.

**Augmented Environment Lab**, Georgia Tech

August 2018 - December 2018

**Augmented Reality Undergraduate Researcher**

- Contributed to the idea creation and Unity development of a mixed reality theatre performance, "The Safety Show" in collaboration with DramaTech Theatre where AR was used to convey and visualize the emotions of the scene.

## PROJECTS

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**Cardiovascular Disease Classification**

- Compared statistical values of supervised & unsupervised machine learning algorithms to analyze their performances using Scikit-Learn.

**Electrocardiogram (ECG) Anomaly Detection**

- Developed an LSTM Autoencoder to detect signs of abnormal cardiac activities with an accuracy of 95%.

**Real-time Face Recognition**

- Implemented a customized face recognition system on Raspberry Pi using OpenCV that builds a database for detected faces in real-time.

**Space Trader**

- Built an Android application using Java that reintroduces a classic strategy game, Space Trader.
- Used Firebase for authentication, access control, and data management, such as real-time game item transaction tracking.

## PUBLICATION & PRESENTATION

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• H. Jin, I. Kang, G. Choi, D. Molinaro, A. Young, Wearable Sensor-Based Step Length Estimation During Overground Locomotion Using a Deep Convolutional Neural Network, *IEEE Engineering in Medicine and Biology Society (EMBC)*, May 2021, Submitted

• H. Jin, M. Shepherd, D. Molinaro, I. Kang, A. Young, Convolutional Neural Network-based Gait Phase Estimation and Classification Using a Robotic Ankle Exoskeleton, *Georgia Tech Annual Undergraduate Research Symposium*, April 2021

## LEADERSHIP

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**Korean American Scientists and Engineer Association (KSEA)**, Georgia Tech

May 2020 - May 2021

**President**

- Empowered Korean-American students at Georgia Tech by providing opportunities to engage in career development and networking.