Heejoo Jin

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EDUCATION

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

SKILLS

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

PROFESSIONAL EXPERIENCE

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

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

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 91%.
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

· 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

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.