

# BYUNGKEUN CHOI

☎: (+82) 10-8320-2316 ◇ ✉: cbcc12345@hanyang.ac.kr / cbcc1234@gmail.com

Seoul, Korea

🐙: [github.com/DukiChoi](https://github.com/DukiChoi) ◇ [CV download link](#)

## EDUCATION

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**M.S. in Electronic Engineering**, Hanyang University

September 2021 - February 2024

Advisor: Jeonghee Lee

Research Area: Bio-signal Processing and NeuroEngineering

**B.A. in Electrical Engineering**, Hanyang University

February 2013 - September 2021

## SKILLS

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### Technical Skills

- Embedded software development(C++, Arduino)
- App development(Java)
- VR App development(Unity, C#)
- Data Analysis(Matlab, Python)
- PCB Design and Development (KiCad) and PCB soldering and Assembly

### Language

- Korean(Native)
- English(Fluent): TOEIC 910, TOEIC Speaking 170(AL)
- Japanese(Intermediate): JLPT N3(before revision)

## EXPERIENCE

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### Undergraduate Research Student

Embedded Security and Internet of Things Lab, Hanyang University

- Developed an embedded program to track sensor positions using data from a 9-axis IMU sensor with filtering techniques, and programmed an MCU board in C++ and Python for data visualization.

## PROJECTS

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### Development of a Worker Safety Alert Android Application Using UWB Technology

- Developed an Android application that receives distance data from UWB anchors via BLE and provides real-time safety alerts to workers when within a specified range of machinery in construction environments. ([Github link](#))

### Development of a Pipe Detection App Using IMU Sensors and Magnetometer Data

- Created an Android app that uses magnetometer data from an IMU sensor on an nRF52 board, programmed via Arduino, to detect metal pipes. Data is transmitted via BLE for real-time detection and visualization. ([Github link](#))

### Real-Time Location Visualization Application on Android

- Created an Android app that visualizes real-time user location data which is acquired in advance through UWB triangulation, incorporating Android animation and BLE. ([Github link](#))

## **Development of a Hand Tremor Measurement System Integrating Virtual Reality and HCI Devices**

- Developed a Hand Tremor Measurement system integrating Virtual Reality and custom-designed HCI devices to accurately analyze tremors in patients with conditions like Parkinson's disease.

## **PUBLICATIONS**

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### **Development of a Virtual Reality System for the Precise Measurement and Evaluation of Movement Disorders**

Byungkeun Choi, Jeonghee Kim\*

*Paper in preparation*

### **Development of a Real-time Wireless Multi-node Metal Pipeline Localization System via Bluetooth Link**

Bing Jiang, Byungkeun Choi, Hyunsang Cho, Hangu Park, Jeonghee Kim\*

*IEEE/IEIE ICCE-Asia 2024*

## **TEACHING EXPERIENCE**

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Teaching Assistance, Microprocessor, Hanyang University

Teaching Assistance, Embedded System Design, Hanyang University

Teaching Assistance, Digital Signal Processing, Hanyang University

Personal Assistant to a Foreign Professor(David Wagner), Hanyang University