

# HOON JIN JUNG

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## RESEARCH INTEREST

Human Computer Interaction (HCI), Sensors, Ubiquitous Computing, Wearable Computing with an emphasis on Machine Learning

## EDUCATION

### Hanyang University, Seoul, Republic Of Korea

B.S. in Electronic Engineering and Biomedical engineering

Mar.2014 - Feb.2021

Overall GPA: 3.79/4.00 Major GPA: 3.87/4.00 (last two years GPA: 4.00/4.00)

### University Of Texas At Austin, United States Of America

Exchange program in Electrical and Computer Engineering

Aug.2019 - Jan.2020

Major GPA: 4.00/4.00 (Upper Division GPA: 4.00/4.00)

## RESEARCH EXPERIENCE

### Brain Computer Interface as an Emotional Assistant: Making computer more empathic and helpful to users

Hanyang University, Republic of Korea

Feb.2020 -

Target Journal/Conference: IMWUT 2021/2022

- Content: Developing real-time emotion assessing system with 89% classification accuracy, that controls peripheral environment to encourage user's emotional recovery.
- Contribution: Built emotion classification model, programmed APIs to control surrounding environment.

### Sensing Soft Grasper: Silicon Finger with Tactile Sensor

Funded by Industry-University Cooperation Foundation Hanyang University, Republic of Korea

Mar.2020 -

Target Journal:

- Developed a Piezoelectric Deflection Sensor (PVDF) based precisely controllable compliant soft robot finger (pneumatic silicone actuator) to make human-robot interaction safer and more comfortable.
- Contribution: Applied PVDF sensor to solve the precise control problem of pneumatic soft actuator and fully automatized grasping process through micro controller.

### CAPTCHA Project: System that can Read Distorted Text Images

Personal Project

Aug.2020

- Developed a system that can read text correctly from image with distorted text with accuracy of 95%
- Solved data insufficiency (1000 training data set) and over-fitting problem through cropping the images into single character and augmenting it to multiply training data sets.

### Chest Laminated Ultrathin and Stretchable Wireless E-Tattoo

University of Texas at Austin, United States of America

Aug.2019 - Dec.2019

- Participated in research developing a wireless wearable device that perform synchronous ECG and SCG measurement and extracts various cardiac time intervals to track heart health.
- Contribution: Fabricated and applied new serpentine design on the Bluetooth layer and integrated it to the former model.

## LAB EXPERIENCE

### Nano Bio Technology (NBT) Lab winter internship

Hanyang University, Republic of Korea

Jan.2019 - Feb.2019

- Participated Twistron research, energy harvesting in artificial muscle made with twisted Carbon Nano Tube(CNT) thread.
- Contribution: Optimize the thickness for the energy efficiency, fabricated CNT thread and tested the generated current.

### Nano electronics device Lab (NDL) Undergraduate Research Assistant

Hanyang University, Republic of Korea

Mar.2019 - Jun.2019

- Contribution: Structural examination of the microfluidic plate to test separation accuracy of cancer cells from blood model, Optimize the injection speed of the model.
- Instructed about controlling microprocessor controlled micro pump.

## SKILLS

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- Programming and Tools: Python, Matlab, Simulink, Arduino, Catia, LaTeX
- Core skills: Machine Learning, Electronic Circuit, 3D design and printing, laser cutter
- Language: English(fluent), Korean(native), Chinese(fluent)

## ACCOMPLISHMENTS AWARDS

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|---|---------------------|
| • National Science Technology Scholarship   | Mar.2014 – Jun.2014 |
| • Leadership Scholarship                    | Sep.2014 – Dec.2014 |
| • Achievement award Republic Of Korea Army  | Aug.2015 – May.2017 |
| • Academic Honor award                      | Mar.2018 – Jun.2018 |
| • Academic excellent grade award            | Sep.2018 – Dec.2018 |
| • Academic Honor award                      | Mar.2019 – Jun.2019 |
| • Academic Excellent Scholarship            | Mar.2019 – Jun.2019 |
| • The Right Hands scholarship (4 semesters) | Mar.2019 – Dec.2020 |

## VOLUNTEER WORK

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### Hanyang International Student Ambassador

Hanyang University, Republic of Korea

Mar.2018 – Dec.2018

- Taught Circuit Theory1 as a teaching mentor for two international students.
- Opened an international event on Korean traditional holiday to help international students living alone in Korea enjoy.

### 1:1 Korean Language Tutoring

Hanyang University, Republic of Korea

Sep.2018 – Dec.2018

- Taught Korean in English to an international fellow student.
- Taught Korean in Chinese to an internal fellow student.

### 2018 HY Buddy Program

Hanyang University, Republic of Korea

Feb.2018 – Jun.2018

- Successfully completed 30 hours of volunteer work and showed positive attitude as a mentor of international exchange students.
- Supported my team to get used to school inside and outside.

## LEADERSHIP

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### Founder & First President of Hanyang Rock Climbing

Hanyang University, Republic of Korea

Feb.2020 –

- Designed the club logo by myself.
- Founded and recruited rock climbing club successfully.

### Student Representative of the Department of Electronic Engineering

Hanyang University, Republic of Korea

Mar.2014 – Dec.2014

- Attended representative's meeting every week with responsibility.
- Hosted an event for student and professors as a representative student of the department.

## OTHERS

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### Renmin University, Beijing, China

Intermediate Chinese language course program

Aug.2017 – Jan.2018

Achieved Hanyu Shuiping Kaoshi(HSK) level 4