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 Universuty, 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 (Upper Division 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 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.

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.

CAPTCHA Project: System that can Read Distorted Text Images

Personal Project   *Aug.2020*

- Developed a system that can read text correctly form 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.

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

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

ACCOMPLISHMENTS AWARDS

- 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

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

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

Renmin University, Beijing, China   **Aug.2017 – Jan.2018**
Intermediate Chinese language course program
Achieved Hanyu Shuiping Kaoshi(HSK) level 4