

Sim Jae Yoon

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EDUCATION

Pohang University of Science and Technology (POSTECH)

B.S in Convergence IT Engineering (mainly Computer Engineering)

Pohang, Republic of Korea, Feb. 2017 ~ Feb. 2022

SKILLS SUMMARY

S/W: C, C++, Python, Java, MATLAB, OCaml, OpenCV, PyTorch

H/W: Arduino, OrCAD

EXPERIENCE

Software Development Project, POSTECH, Pohang, Republic of Korea, Mar. 2018 ~ Jun. 2018

- **Title: Docx 2 pptx**
- Designed a tool for producing presentation materials according to pre-planned UI by using Python and Python-docx and pptx library
- Service that converts a word-style file to a ppt-style file automatically at one's wants

Software Development Project, POSTECH, Pohang, Republic of Korea, Aug. 2018 ~ Dec. 2018

- **Title: Rating system for visual media by bio-signal measurement**
- Designed a biometric data-based video rating system by using Python and Arduino
- Service that gets biometric data from GSR, ECG, Heart-rate, and EEG sensor and analyzes graphs that vary according to visual media

Hardware Development Project, POSTECH, Pohang, Republic of Korea, Apr. 2019 ~ Jun. 2019

- **Title: Raising animals through affection**
- Designed a finite state machine system game of visually raising animals by using OrCAD
- Game of simple algorithms that users can enjoy with the bread board

Software Development Project, POSTECH, Pohang, Republic of Korea, Mar. 2020 ~ Jun. 2020

- **Title: Designing sensor model for autonomous driving on the roads at night**

- Designed detection model for autonomous driving on highways at nights by using Python and OpenCV
- A fusion of low-cost night vision and thermal cameras to recognize surrounding vehicles

Hardware Development Project, POSTECH, Pohang, Republic of Korea, Sep. 2020 ~ Dec. 2020

- **Title: Ergonomic wheelchair model for disabled bowlers**
- Designed an ergonomic wheelchair model made of 3D model by using Arduino
- Wheelchair that controlled by bowling gloves through data processing and Bluetooth

Software Research Project, POSTECH, Pohang, Republic of Korea, Sep. 2020 ~ Dec. 2020

- **Title: Multi-modal object detection in thermal imagery using saliency map.**
- Proposed a novel multi-modal framework to extend and improve upon any region CNN based object detector in thermal domain by borrowing features from RGB domain and saliency map by using Python and Pytorch
- Computer vision project for improving accuracy or computational efficiency of object detection with specific data sets

Software Development Project, 4DReplay, Seoul, Republic of Korea, Jun. 2021 ~ Jun.2021

- **Title: Panorama stitching and camera moving by controlling the gimbal**
- Designed an image processing algorithm that makes panorama image effectively and control the gimbal by processing the xml file by using Python, Pytorch, C++, OpenCV
- Service that performs various functions like zooming, tracking, searching, etc. after creating panoramic image and controlling the gimbal to move the camera

ACTIVITIES

- **Donation to Save the Children**

Online, Mar. 2017 ~ Present

- **Football Club, Kickoff**

Pohang University of Science and Technology (POSTECH), Mar. 2017 ~ Jun. 2019

- **Exchange Student**

Seoul National University (SNU), Jun. 2018 ~ Jul. 2018

- **Einstein Class (Educational Service)**

Beobseongpo Elementary School, Dec. 2018 ~ Feb. 2019

- **University Festival Management Committee Planning Team Leader**

Pohang University of Science and Technology (POSTECH), Apr. 2019 ~ May 2019

- **Exchange Student**

University of California Berkeley (UCB), Jun. 2019 ~ Aug. 2019

- **Exchange Student**

Stony Brook University of New York (SBU), Aug. 2019 ~ Dec. 2019

- **Exchange Student**

Korea National University of Arts (K.Arts), Dec. 2019 ~ Jan. 2020

- **Student Adviser (SA) for freshmen**

Pohang University of Science and Technology (POSTECH), Jan. 2020 ~ Dec. 2020

- **Student Adviser (SA) President**

Pohang University of Science and Technology (POSTECH), Jan. 2020 ~ Dec. 2020

- **Undergraduate Research Intern**

Computer Vision (CV) Lab

Pohang University of Science and Technology (POSTECH), Jun. 2020 ~ Feb. 2021

- **Multimedia Group Development and Research Intern**

4DReplayKorea, Jun. 2021 ~ Aug. 2021

- **Undergraduate Research Intern**

Artificial Intelligence and Medical Imaging (AIMI) Lab

Pohang University of Science and Technology (POSTECH), Sep. 2021 ~ Dec. 2021

INTERESTS

- Traveling
- Watching Various Media
- Playing Baseball
- Working Out
- Cycling