Jaewoo Jung

Jaewoo Jung
dev@lukael.kr
https://lukael.kr

Address
Seoul, Republic of Korea

Update
2021-08-26

MS/PhD Student

Education

2020 - Present, Yonsei University
Electrical and Electronic Engineering

2015 - 2020, Yonsei University
B.S. in Electrical and Electronic Engineering

2013 - 2015, Changwon Science High School
Chemistry

Experience

Mar 2020 - Present, *Graduate Student, Optical Imaging Systems Laboratory in Yonsei University*
Detailed achievements:
- Human-Biology Interaction
  - Biotic Games
- Lensless Microscopy
  - Digital In-line Holography
- Lensless Imaging
  - Deep Learning for image reconstruction

Jul 2019 - Feb 2020, *Engineer, Toky*
Detailed achievements:
- Voice recognition kiosk(Prototype)
  - Voice recognition
  - Raspberry PI

Jan 2019 - Feb 2020, *Internship, Optical Imaging Systems Laboratory in Yonsei University*
Detailed achievements:
- Human-Biology Interaction
  - Biotic Games
- Microscopy
  - Digital In-line Holography

Dec 2016 - Dec 2018, *Internship, Biological Cybernetics Laboratory in Yonsei University*
Detailed achievements:
- Swarm robotics
  - Hardware
    * FreeRTOS
    * Wi-Fi
    * Bluetooth
    * Vibration Control
  - Software
    * Formation
    * Charging system

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Mar 2017 - Dec 2017, *Research Engineer, Luxrobo*
Detailed achievements:

- Network Module Firmware(ESP32)
    - FreeRTOS
    - Wi-Fi
    - BLE
    - USART
- OS Development
    - RTOS research
    - Contiki OS
- Bluetooth 5
    - Nordic nRF52DK
    - Mesh Network
- NLP
    - Chatscript
    - Slack-Chatscript Linkage(Python)

Jan 2017 - Dec 2017, *President, SBTM*
Robot club in Yonsei University

Software Development Skills

Programming

- C/C++
- Python
- MATLAB

Computer Software

- LaTeX
- Eagle CAD
- Git

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Competitions

2019, *Undergraduate Research Program,* KOFAC
High speed lensless camera for microsaccades measurement

2019, *International Student Car Competition,* KTSA
Autonomous driving Cart

2018, *International Student Car Competition,* KTSA
Autonomous driving Cart
LIDAR Team

2017, *Smart Model Car Competition,* Hanyang University
Autonomous driving Model Car
Team Leader, Hardware Engineer

2016, *Smart Model Car Competition,* Hanyang University
Autonomous driving Model Car
Hardware Engineer

2016, *Korea Robot Aircraft Competition,* KAIA
Autonomous driving Quadcopter
Team Leader, Hardware Engineer

2014, *Student Science Invention Competition,* GNSE
Mono/Stereo Earphone

2014, *ISEF-K,* KOFAC
Study on Gas phase Adsorption of Toxic substances on ES, ESM and Filter

2014, *Science Exhibition,* GNSE
Measuring Chemical reaction rate using Smartphone

2014, *Steam R&E Festival,* KOFAC
Smartphone Application for Chemistry Experiment

2013, *Student Science Invention Competition,* GNSE
Easy Bookbinding Tape Cutter

2013, *Student Creativity Festival,* GNE
Between Ventilation and Insulation

2013, *Embedded Software Contest,* KESSIA
Minesweeper Robot using LEGO Mindstorm
Hardware Engineer

2013, *R&E Festival,* KOSAF
Develop Filters made from ESM's Toxic substances Absorptive Ability

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Publications

2022, *Fabrication of Integrated Lensless Cameras via UV-Imprint Lithography,* **IEEE Photonics Journal**

2021, *A Smartphone-Based Fourier Ptychographic Microscope Using the Display Screen for Illumination,* **ACS Photonics**

2020, *Lensless Imaging with an End-to-End Deep Neural Network,* **2020 IEEE International Conference on Consumer Electronics-Asia (ICCE-Asia)**

2020, *MicroAquarium : An Immersive and Interactive Installation with Living Microorganisms,* **ACM conference on Human Factors in Computing Systems (CHI) Extended Abstracts**

2018, *Various Swarm Behavior Inspired by Nature Using Vibration Locomotion Robots,* **Capstone Design**

2018, *Swarm Robots Using Vibration Motor Control,* **ICROS**

Conference Presentation

2021, *Poster,* **Optics and Photonics Congress**
Jaewoo Jung, Tae Young Kim, Donggeun Bae, Ernest K. Ryu, Seung Ah Lee, *Unrolled ADMM for Image Reconstruction in Lensless Cameras*

2021, *Poster,* **Optics and Photonics Congress**
Nakkyu Baek, Myeong Hun Seong, Tae Young Kim, **Jaewoo Jung**, Seung Ah Lee, *Single-Shot Full-Stokes Lensless Camera*

2021, *Poster,* **Optics and Photonics Congress**
Kyungwon Lee, Kyung Chul Lee, **Jaewoo Jung**, Seung Ah Lee, *Miniaturized System for Live-Cell Imaging Based on Fourier Ptychographic Microscopy*

2020, *Poster,* **KSM Annual Fall Conference**
Kyung Chul Lee, Kyungwon Lee, **Jaewoo Jung**, Se Hee Lee, Seung Ah Lee, *Compact and Low-cost Fourier Ptychographic Microscopy for Wide-field and High-resolution Imaging of Cell Screening*

2020, *Poster,* **Advanced Biophotonics Conference Optical Society of Korea**
Tae Young Kim, Kyungchul Lee, Kyungwon Lee, Nakkyu Baek, **Jaewoo Jung**, Seung Ah Lee, *High-Speed Lensless Camera for Microsaccade Measurement*

2020, *Oral,* **IEEE/IEIE ICCE-ASIA**
Kyung Chul Lee, Se Hee Lee, **Jaewoo Jung**, Kyungwon Lee, Seung Ah Lee, *Wide-field, High-resolution Computational Microscopy on a Smartphone*

2020, *Poster,* **Optical Society of Korea Summer Meeting**
Tae Young Kim, Kyungchul Lee, Kyungwon Lee, Nakkyu Baek, **Jaewoo Jung**, Juhung Kim, Kinwook Kim, Young-Seok Seo, Seung Ah Lee, *High-Speed Lensless Eye Tracker for Microsaccade Measurement*

2020, *Poster,* **Optical Society of Korea Summer Meeting**
Kyung Chul Lee, Kyungwon Lee, **Jaewoo Jung**, Se Hee Lee, Seung Ah Lee, *Wide-field Computational Microscope on a Smartphone Using Screen Illumination*

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2019, *Poster,* **Advanced Biophotonics Conference Optical Society of Korea**
Tae Young Kim, Nak Kyu Baek, **Jaewoo Jung**, Minhyeok Lee, Seung Ah Lee, *High-Speed Lensless Camera for Microsaccade Measurement*

Plays

2019, *Core-XY Autonomous Chess board*

2018, *Localization using multiple Gyroscope*

2016, *Humanoid(KHR-1)*

2016, *LED cube($8\times8\times8$)*

2016, *Robot Soccer*

2015, *Quadcopter*

2015, *Guitar Effector*

Interests

Professional
NAS, DevOps, Forensic, Security

Personal
Bass guitar, Reading, Tea