# Jaesung Rim

Ph.D. student
POSTECH
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Webpage: https://rimchang.github.io

## Education

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| Sep. 2020 ~ Present | **Pohang University of Science and Technology**<br>Ph.D. Student in Graduate School of Artificial Intelligence<br>*Advisor: Sunghyun Cho* | Pohang, Korea |
| Sep. 2018 ~ Aug. 2020 | **Daegu Gyeongbuk Institute of Science and Technology**<br>M.S. in Information and Communication Engineering<br>Thesis: Real-World Blur Dataset for Learning and Benchmarking Deblurring Algorithms<br>*Advisor: Sunghyun Cho* | Daegu, Korea |
| Mar. 2011 ~ Aug. 2017 | **Kwangwoon University**<br>B.S. in Industrial Psychology | Seoul, Korea |

## Experience

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| May. 2024 ~ Aug. 2024 | **Huawei Finland Research Center**<br>Research Intern at Camera AI Solutions Team<br>Topic: Video deblurring utilizing dual cameras on smartphones<br>*Mentor: Erman Acar* | Tampere, Finland |

## Research Interests

- Computational Photography
- Image/video restoration
- Deblurring
- Mobile imaging

## Publications

1. **Jaesung Rim**, Woohyeok Kim, Haeyun Lee, Heemin Yang, Ke Wang, Sunghyun Cho, "Gyro-based Deep Video Deblurring", Under review
2. Heemin Yang, **Jaesung Rim**, Seungyong Lee, Seung-Hwan Baek, Sunghyun Cho, "Gyro-based neural single image deblurring", CVPR 2025
3. **Jaesung Rim**, Junyong Lee, Heemin Yang, Sunghyun Cho, "Deep Hybrid Camera Deblurring for Smartphone Cameras", SIGGRAPH 2024

4. Sanghyun Kim*, Min Jung Lee*, Woohyeok Kim, Deunsol Jung, **Jaesung Rim**, Sunghyun Cho, Minsu Cho, "Burst Image Super-Resolution with Base Frame Selection", CVPRW NTIRE 2024
5. Dongwoo Lee, Jeongtaek Oh, **Jaesung Rim**, Sunghyun Cho, Kyoung Mu Lee, "ExBluRF: Efficient Radiance Fields for Extreme Motion Blurred Images", ICCV 2023
6. Sohyun Lee*, **Jaesung Rim***, Boseung Jeong, Geonu Kim, ByungJu Woo, Haechan Lee, Sunghyun Cho, Suha Kwak, "Human Pose Estimation in Extremely Low-Light Conditions", CVPR 2023
7. **Jaesung Rim**, Geonung Kim, Jungeon Kim, Junyong Lee, Seungyong Lee, Sunghyun Cho, "Realistic Blur Synthesis for Learning Image Deblurring", ECCV 2022
8. Junyong Lee, Hyeongseok Son, **Jaesung Rim**, Sunghyun Cho, Seungyong Lee, "Iterative Filter Adaptive Network for Single Image Defocus Deblurring.", CVPR 2021
9. **Jaesung Rim,** Haeyun Lee, Jucheol Won, Sunghyun Cho, "Real-World Blur Dataset for Learning and Benchmarking Deblurring Algorithms.", ECCV 2020

## Publications (Domestic)

1. **Jaesung Rim**, Sunghyun Cho, "Per-pixel Blur Kernel Estimation Network", IPIU 2021
2. Kiyeon Kim, **Jaesung Rim**, Sunghyun Cho, "Light-weight Image Restoration Network for Image Recognition", KCC 2021

## Patents

1. Sanghyun Kim, Minjung Lee, Woohyeok Kim, Deunsol Jung, **Jaesung Rim**, Manjin Kim, Sunghyun Cho, Minsu Cho, "Base Frame Selection for Burst Image Enhancement on Multiple Exposure-Time Images", (KR, filing for a patent)
2. Sohyun Lee, **Jaesung Rim**, Boseung Jeong, Geonu Kim, ByungJu Woo, Haechan Lee, Sunghyun Cho, Suha Kwak, "Method and Apparatus for Learning Human Pose Estimation In Low-light Conditions", 10-2023-0154857 (KR, issued), 18/364,823 (US, issued)

## Professional Activities

**Invited talk**

- Realistic Blur Synthesis for Learning Image Deblurring, KCCV 2023, Poster
- Programming Practice of the State of the Arts, KCCV 2023, Tutorial
- Real-World Blur Dataset for Learning and Benchmarking Deblurring Algorithms, KCGS 2020, Poster

**Reviewer**

- IEEE Computer Vision and Pattern Recognition (CVPR)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- The Association for the Advancement of Artificial Intelligence (AAAI)
- The Visual Computer (TVC)

## Projects

- Development of Neural Camera ISPs for Multi-Degradation Restoration and Perceptual Image Enhancement, MSIT, Korea (Mar. 2023 ~ Present)
- eXVision: Visual Recognition in Extreme Conditions, Samsung Research Funding & Incubation Center for Future Technology, Korea (May. 2018 ~ Present)
- Extreme Exploitation of Dark Data Research Center, MSIT, Korea (Aug. 2018 ~ Present)
- End-to-end wide-baseline enhancement via robust alignment from raw image bursts with multiple degradation, Samsung Advanced Institute of Technology, Korea (Nov. 2022 ~ Oct. 2023)
- Real and realistic-looking synthetic data generation for low-light image enhancement and recognition, MSIT, Korea (Mar. 2020 ~ Feb. 2023)

## Teaching Experiences

- Teaching assistance for Objective-Oriented Programming, Mar. 2023 ~ Jun. 2023
- Teaching assistance for Computer Vision (Hyundai AI Academy), Dec. 2020 ~ Dec. 2020
- Teaching assistance for Programming Practice, Mar. 2020 ~ Jun. 2020

## References

- **Prof. Sunghyun Cho**, *Professor @ POSTECH*

  Relationship: Ph.D. advisor

  Email: s.cho[at]postech.ac.kr

- **Prof. Seungyong Lee**, *Professor @ POSTECH*

  Relationship: Collaborator / Mentor during the doctoral study

  Email: leesy[at]postech.ac.kr

- **Dr. Junyong Lee**, *Research Scientist @ Samsung AI Center - Toronto*

  Relationship: Collaborator / Lab colleague during the doctoral study

  Email: j.lee8[at]samsung.com