

Ren Wang

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Education

National Taiwan University , Taipei, Taiwan <i>Ph.D. Candidate in Computer Science and Information Engineering</i> <ul style="list-style-type: none">Advisor: Yung-Yu Chuang	2021–present
National Tsing Hua University , Hsinchu, Taiwan <i>M.S. in Computer Science</i> <ul style="list-style-type: none">Advisor: Hwann-Tzong Chen	2013–2015
National Tsing Hua University , Hsinchu, Taiwan <i>B.S. in Computer Science</i>	2009–2013

Work Experience

MediaTek Inc. , Hsinchu, Taiwan <i>Senior Engineer, Multimedia Development Div. XVI</i> <i>Senior Engineer, Multimedia Technology Development Div.</i> <i>Engineer, Multimedia Technology Development Div.</i> <i>Engineer, Advanced Communication Technology Div.</i>	03/2023–present 06/2020–02/2023 02/2018–05/2020 12/2015–01/2018
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Selected Projects

Artificial Intelligence on Noise Reduction , MediaTek <i>Achievements</i> <ul style="list-style-type: none">Participated in landing this project on 25 smartphones from June 2019 to Feb 2022, where the clients included OPPO, vivo, Xiaomi, realme, and OnePlus. <i>Responsibilities</i> <ul style="list-style-type: none">Applied cutting-edge AI techniques to noise reduction on MediaTek's image signal processors.Optimized neural networks to reduce the computation time and memory/power consumption on MediaTek's deep learning accelerators.Collaborated closely with relevant projects, such as image enhancement, demosaicing, and HDR.	2017–2022
Activity and Gesture Recognition , MediaTek <i>Achievements</i> <ul style="list-style-type: none">Participated in landing this project on Helio X30 during 2017, where the client was Meizhu. <i>Responsibilities</i> <ul style="list-style-type: none">Did research on applying deep learning to gesture recognition using IMU sensors.Implemented statistical models and optimized their computational costs on mobile platforms, where the models included SVM, GMM, and HMM.	2016–2017

Publications

- **Ren Wang**, Yu-Lun Liu, Yu-Hao Huang, and Ning-Hsu Wang, "Methods and apparatuses of depth estimation from focus information," U.S. Patent Appl. 17/677,365, filed Feb 22, 2022.
- Ning-Hsu Wang, **Ren Wang**, Yu-Lun Liu, Yu-Hao Huang, Yu-Lin Chang, Chia-Ping Chen, and Kevin Jou, "Bridging unsupervised and supervised depth from focus via all-in-focus supervision," in *Proceedings of IEEE International Conference on Computer Vision (ICCV 2021)*, Oct 2021.
- Chien-Chuan Su, **Ren Wang**, Hung-Jin Lin, Yu-Lun Liu, Chia-Ping Chen, Yu-Lin Chang, and Soo-Chang Pei, "Explorable tone mapping operators," in *Proceedings of International Conference on Pattern Recognition (ICPR 2020)*, Jan 2021.
- Ke-Chi Chang, **Ren Wang**, Hung-Jin Lin, Yu-Lun Liu, Chia-Ping Chen, Yu-Lin Chang, and Hwann-Tzong Chen, "Learning camera-aware noise models," in *Proceedings of European Conference on Computer Vision (ECCV 2020)*, Aug 2020.

Honors

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| • MediaTek vAward (12 times; for excellent performance) | 2015–2021 |
| • MediaTek Project Award (for Dimensity 1000) | July 2020 |
| • Valedictorian , NTHU CS | June 2013 |
| • Finalist of the Senior Project Contest , NTHU CS | Oct 2012 |

Academic Activities

Paper Reviewer

- IEEE Transactions on Image Processing

Teaching Assistant, National Tsing Hua University

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| • ISA 525700: Computer Vision for Visual Effects | Spring 2015 |
| • EECS 111000: Introduction to Programming (C language) | Fall 2013, 2014 |
| • CS 321100: Introduction to Communication | Fall 2014 |

Technical Skills

- **Domain knowledge:** machine learning, computational photography, image processing
- **Programming:** Python, C/C++, Git, TensorFlow, PyTorch, scikit-learn, OpenCV