Ren Wang

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Education

- **National Taiwan University**, Taipei, Taiwan 2021–present
  - Ph.D. student in Computer Science and Information Engineering
  - Advisor: Yung-Yu Chuang
- **National Tsing Hua University**, Hsinchu, Taiwan 2013–2015
  - M.S. in Computer Science
  - Advisor: Hwann-Tzong Chen
- **National Tsing Hua University**, Hsinchu, Taiwan 2009–2013
  - B.S. in Computer Science

Work Experience

- **MediaTek Inc.**, Hsinchu, Taiwan
  - Senior Engineer, Multimedia Technology Development Div. 06/2020–present
  - Engineer, Multimedia Technology Development Div. 02/2018–05/2020
  - Engineer, Advanced Communication Technology Div. 12/2015–01/2018

Selected Projects

- **Artificial Intelligence on Noise Reduction**, MediaTek 2017–2022

  Achievements
  - This project landed on 25 smart phones from June 2019 to Feb 2022. The clients included OPPO, vivo, Xiaomi, realme, and OnePlus.

  Responsibilities
  - 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 several relevant projects, such as image enhancement, demosaicing, and HDR.
- **Activity and Gesture Recognition**, MediaTek 2016–2017

  Achievements
  - This project landed on Helio X30 during 2017. The client was Meizhu.

  Responsibilities
  - Did research on applying deep learning to gesture recognition using MEMS sensors.
  - Implemented statistical models and optimized their computational costs on mobile platforms. The models included SVM, GMM, and HMM.

PUBLICATIONS / PATENT

- **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, 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 *Proc. IEEE International Conference on Computer Vision (ICCV)*, 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 *Proc. International Conference on Pattern Recognition (ICPR)*, 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 *Proc. European Conference on Computer Vision (ECCV)*, 2020.

HONORS

- **MediaTek vAward** (12 times) 2015–2021
  - Awarded for excellent individual or team performance.
- **MediaTek Project Award** July 2020
  - Awarded for contributions to the Dimensity 1000 project.
- **Valedictorian**, NTHU CS June 2013
  - Delivered a farewell speech at the graduation ceremony.
- **Finalist of the Senior Project Contest**, NTHU CS Oct 2012
  - Awarded for a mobile augmented reality (AR) game.

ACADEMIC ACTIVITIES

- **Paper Reviewer**
  - IEEE Transactions on Image Processing
- **Teaching Assistant**, National Tsing Hua University
  - 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

- Python, C/C++, Git, TensorFlow, scikit-learn, OpenCV