Chen, Yi-Ting □+1 412-638-4051 • ⋈ vtchen@umo

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☐LinkedIn ☎Google scholar ੵGithub ��Website

Education

University of Maryland
 Ph.D. in Computer Science - Dean's fellowship

 Carnegie Mellon University - School of Computer Science Master in Computer Vision (MSCV)

National Taiwan University - Graduate Institute of Electronics Engineering
 Master in Electronics Engineering

National Cheng Kung University
 Bachelor in Electrical Engineering | Industrial and Information Management, double major

College Park, MD, United States

August 2021 - May 2026

Pittsburgh, PA, United States

December 2020

Taipei, Taiwan October 2016

October 2016 **Tainan. Taiwan**

■Paper ■Video

June 2013

Publication

Multimodal Object Detection via Probabilistic Ensembling (Oral)
 Yi-Ting Chen*, Jinghao Shi*, Zelin Ye*, Christoph Mertz, Deva Ramanan, Shu Kong
 IEEE Conference on European Conference on Computer Vision (ECCV), 2022

o FSA-Net: Learning Fine-Grained Structure Aggregation for Head Pose Estimation from a Single Image Tsun-Yi Yang, Yi-Ting Chen, Yen-Yu Lin, Yung-Yu Chuang
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019

■ Paper

SRIANN: Sphere Ring Intersection for Approximate Nearest Neighbor Search in Videos
 Yi-Ting Chen, Wei-Chih Tu, Shao-Yi Chien

IEEE International Conference on Image Processing(ICIP), 2018
 Fast Video Super-Resolution via Approximate Nearest Neighbor Search (Oral)
 Yi-Ting Chen, Wei-Chih Tu, Shao-Yi Chien

Paper

IEEE International Conference on Image Processing(ICIP), 2016

Industry Experiences

Meta Burlingame, CA, United States

Research Scientist Intern May 2022 - Now

Neural radiance fields related topics

Argo Al Pittsburgh, PA, United States
Software Engineer Intern May 2021 - Aug 2021

o Conducted research on multimodal late fusion for object detection.

Amazon Pittsburgh, PA, United States

Applied Scientist Intern May 2020 - August 2020

 Developed deep network for 3D object detection algorithm with 2D feature aided for more accurate detection by Pytorch.

Achieved 3 percent improvement on mean average precision(mAP) with proposed method.

Mediatek Taipei, Taiwan

Software Engineer, Multimedia Division October 2016 - May 2018

- Established algorithm to enhance image/video contrast that works with low computational cost and high flexibility for smart phone chips.
- Developed a scene recognition algorithm to assist with camera auto-exposure and auto-white-balance functions, raising the correctness of color assignment.
- Implemented a universal auto-white-balance calibration approach that eliminated the difference between different modules, saving time for module calibration.

Research Experiences

University of Maryland, with Prof. Jia-Bin Huang NeRF editing

College Park, MD, United States
May 2022 - Current

Carnegie Mellon University, with Prof. Deva Ramanan

MSCV Capstone, Multimodal Object Detection for Autonomous Driving

Pittsburgh, PA, United States January 2020 - November 2021

- Developed different fusion strategies for multimodal object detection with Convolutional Neural Networks (CNN) in applications of autonomous driving using Pytorch.
- o Outperformed prior works by 13 percent in relative performance with proposed Baysian late fusion.
- o Collected data of infrared sensor and RGB sensor for autonomous driving applications at different scenarios.

Academia Sinica, with Prof. Yen-Yu Lin

Taipei, Taiwan

Research Assistant

August 2018 - July 2019

- Utilized fine-grained structure of face in feature space for accurate head pose estimation, resulting in a fast and compact CNN model.
- Disentangled the information of image style and person classification features for person re-identification, and verified the disentanglement with cycle consistency of Generative Adversarial Network (GAN) using Pytorch.

National Taiwan University with Prof. Shao-Yi Chien

Taipei, Taiwan

Graduate Research Assistant

September 2013 - October 2016

- Accelerated video super resolution framework via approximate nearest neighbor search, achieving an acceleration rate 20 times faster with MATLAB.
- Parallelized ANN search algorithm with CUDA to achieve higher search accuracy and increased the computation speed over state-of-the-art video ANN search algorithm.

Selected Projects

ObjectSLAM: Visual SLAM with Dynamic Object Removal

CMU - 20 Spring

 Utilizing the information of semantic map from MaskRCNN Improved ORB-SLAM2 with semantic map information from MaskRCNN, achieving dynamic object removal.

Rectangling Panoramic Images via Warping

CMU - 19 Fall

 Implemented SIGGRAPH paper "Rectangling Panoramic Images via Warping", generating rectangular images by content-aware warping.

Teaching Assistant

UMD CMSC422 - Computer Vision CMU 16833 - Robot Localization and Mapping (SLAM) UMD - 22 Spring CMU - 20 Fall

Skills

Programming: C/C++, Python, MATLAB, Verilog **Toolkit**: OpenCV, CUDA, LaTeX, Git, Dockerfile **ML related**: Pytorch, tensorboardx, visdom