Ho Kei (Rex) Cheng

hkchengrex.com
Ph.D. candidate at University of Illinois Urbana-Champaign GitHub: github.com/hkchengrex
Email: hokeikc2 [at] illinois.edu, or hkchengrex [at] gmail.com

Education

Ph.D. in Computer Science
University of Illinois Urbana-Champaign, Illinois, United States 2021 - 2026 (expected)
Advised by Alexander Schwing.

MPhil in Computer Science
The Hong Kong University of Science and Technology, Hong Kong 2019 - 2021
Advised by Chi-Keung Tang and Yu-Wing Tai.
Thesis: *Efficient Video Object Segmentation with Space-Time Correspondence Networks*.

BEng in Computer Science
The Hong Kong University of Science and Technology, Hong Kong 2015 - 2019
With a minor in Robotics.

Research

I worked on various image and video processing algorithms. All of them are open-source and some have been adopted by the industry and academics.

Tracking Anything with Decoupled Video Segmentation *ICCV 2023*
Ho Kei Cheng, Seoung Wug Oh, Brian Price, Alexander Schwing, Joon-Young Lee.

XMem: Long-Term Video Object Segmentation with an Atkinson-Shiffrin Memory Model *ECCV 2022*
Ho Kei Cheng, Alexander Schwing. Used by supervisely and Track-Anything.

Rethinking Space-Time Networks with Improved Memory Coverage for Efficient Video Object Segmentation *NeurIPS 2021*
Ho Kei Cheng, Yu-Wing Tai, Chi Keung Tang. Used by Trioscope and BURST.

Modular Interactive Video Object Segmentation: Interaction-to-Mask, Propagation and Difference-Aware Fusion *CVPR 2021*
Ho Kei Cheng, Yu-Wing Tai, Chi Keung Tang. Used by Sieve.

CascadePSP: Toward Class-Agnostic and Very High-Resolution Segmentation via Global and Local Refinement *CVPR 2020*
Ho Kei Cheng*, Jihoon Chung*, Yu-Wing Tai, Chi Keung Tang.

Work experience

Research Scientist Intern, Adobe Research Summer 2022
Worked closely with Seoung Wug Oh, Brian Price, and Joon-Yong Lee.

Professional activities

- Reviewed for CVPR, ICCV, ECCV, NeurIPS, ICML, IEEE TIP, IEEE PR, IEEE TPAMI, IEEE TCSVT.
- Outstanding reviewer in ICML 2022.
- TAs for multiple undergraduate and graduate level computer vision and deep learning courses.