Adil Karjauv

mikolez.github.io

linkedin.com/in/adil-karjauv

Email : mikolez@gmail.com

Mobile : +31627270348

EDUCATION

- **KAIST, Robotics and Computer Vision (RCV) Lab** Daejeon, Republic of Korea
  Master of Science in Electrical Engineering *Sep. 2019 – Jun. 2021*

- **KAIST** Daejeon, Republic of Korea
  Bachelor of Science in Computer Science *Sep. 2014 – Feb. 2019*

EXPERIENCE

- **Qualcomm AI Research** Amsterdam, Netherlands
  Researcher *Oct. 2022 – Present*
  - Conducting research on efficient video processing and video generative AI:
    - Significantly contributed to the first on-device deep-learning-based video denoising solution at high resolution (QHD and 4K at 30FPS). One patent filed.
    - Significantly contributed to two papers on efficient video diffusion (one accepted at ECCV 2024 and the other one is under review) and two patents.
    - Significantly contributed to the fastest diffusion-based mobile video editing demo on-device (to be presented at NeurIPS 2024).

    Technology Stack: Python, PyTorch.

- **Robotics and Computer Vision (RCV) Lab** Daejeon, Republic of Korea
  Researcher *Sep. 2019 – Jan. 2022*
  - Conducted research on machine learning and computer vision with a focus on adversarial machine learning and its applications in multimedia:
    - Improved hiding capacity of robust deep hiding by x30 times over SOTA.
    - Increased data-free universal attack fooling ratio from 73.59% (SOTA) to 84.08% in the white-box scenario and transferability of the attack from 39.05% (SOTA) to 56.96%.

    Technology Stack: Python, PyTorch, TensorFlow, NumPy, OpenCV.

- **Crazing Lab** Seoul, Republic of Korea
  Robotics Research Engineer *Apr. 2019 – July 2019*
  - **Robotic Vision System:** Developed a robotic vision system based on several CSI cameras and NVIDIA embedded computer (Jetson Xavier). Used a low-level camera API and GStreamer framework to configure cameras. Designed and implemented algorithms for a real-time cylindrical panorama projection for the system.
    Technology Stack: Python, C++, NumPy, OpenCV, ROS, Libargus Camera API, GStreamer.

SELECTED PUBLICATIONS

- **Adil Karjauv**[*], Noor Fathima[*], Ioannis Lelekas, Fatih Porikli, Amir Ghodrati, Amirhossein Habibian ([*]Equal contribution), "MoViE: Accelerating Diffusion-Based Mobile Video Editing", **under review**.

- Kumara Kahatapitiya, **Adil Karjauv**, Davide Abati, Fatih Porikli, Yuki M. Asano, Amirhossein Habibian, "Object-Centric Diffusion for Efficient Video Editing", in **ECCV 2024**.

- Chaoning Zhang, Philipp Benz, **Adil Karjauv**, Jae Won Cho, Kang Zhang, In So Kweon, "Investigating Top-k White-Box and Transferable Black-box Attack", in **CVPR 2022**.

- Chaoning Zhang[*], **Adil Karjauv**[*], Philipp Benz[*], In So Kweon ([*]Equal contribution), "Towards Robust Deep Hiding Under Non-Differentiable Distortions for Practical Blind Watermarking", in **ACM MM 2021**.

- Chaoning Zhang[*], Philipp Benz[*], **Adil Karjauv**[*], In So Kweon ([*]Equal contribution), "Data-free Universal Adversarial Perturbation and Black-box Attack", in **ICCV 2021**.

- Chaoning Zhang[*], Philipp Benz[*], **Adil Karjauv**[*], Geng Sun, In So Kweon ([*]Equal contribution), "UDH: Universal Deep Hiding for Steganography, Watermarking, and Light Field Messaging", in **NeurIPS 2020**.