YUXI WANG

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これまでの研究内容

Self-supervised Representation Learning Via Video Frame Rate Prediction *Aug. 2019 – Mar. 2020*

- Introduced a novel self-supervised task of training the network to predict the frame rate of input videos.
- Demonstrated the learned network's ability to effectively capture the spatial-temporal features in the videos.
- Achieved competitive accuracy on the action recognition task by fine-tuning the learned network.

Video Interpolation Based On Deep Learning *Feb. 2018 – Jun. 2018*

- Proposed a novel video interpolation algorithm that generates more realistic middle frames.
- Designed a new form of optical flow for video interpolation task, improving accuracy and ease of training.
- Designed a novel structure that estimates middle frame feature channel-wise to avoid blurred contours in results.

Video Colorization For Old Films *Dec. 2021 – Jan. 2022*

- Implemented the video colorization deep learning network of Deoldify on PyTorch and enhanced its colorization quality on old films.

Huawei Japan Research Center Tokyo, Japan

Research Engineer intern *Oct. 2020 – Jan. 2021*

- Researched and developed a video deblurring algorithm that achieves state-of-the-art results.
- Designed a novel structure that optimizes the use of input information to enhance the realism of the output, and conducted comparative analysis to validate the effectiveness of the developed components.

CyberAgent AI Lab Tokyo, Japan

Research Engineer intern *Aug. 2020 – Sep. 2020*

- Developed a self-supervised representation learning algorithm for an advertisement dataset, enabling better understanding and prediction of user engagement with ads.
- Devised and implemented a novel learning system that leverages the audio and video correlation of advertisement videos as a powerful self-supervision signal.

SJTU Machine Vision and Intelligence Group Shanghai, China

Undergraduate research assistants *Nov. 2016 – Jun. 2018*

- Developed an IC components classification and position tracking system, enabling efficient and accurate identification and tracking of IC components.
- Designed an innovative algorithm that effectively detects surface scratches on industrial parts with uneven surfaces, and co-authored a paper on the topic published in ICIP 2018 (1508-1512).

Yitu Technology Shanghai, China

Research Engineer intern *Jun. 2017 – Sep. 2017*

- Developed a medical imaging-based lung nodule analysis system.
- Designed, implemented, and accelerated the neural network to achieve the best performance and accuracy.

興味のある研究テーマ

Computer Vision

- Video Understanding
- Self-Supervised Learning & Unsupervised Learning
- Multi-Modal Learning
- Video Frame Interpolation
- Video Generation
- Neural Radiance Fields