

Quality Assessment for Computer Vision Applications (QACoViA)

18-22 November 2024, VQEG online meeting,
hosted by NTIA/ITS



Mission

To study the visual quality requirements for computer vision methods.

Background (1/2)

Methods for visual quality assessment are used to estimate or mimic human judgement when rating the quality of visual media for general purpose. These methods are not necessarily appropriate when the final observer is a computer vision algorithms, notably performing a specific task (e.g.: recognition tasks ...).

Background (2/2)

Therefore, the correct estimation of video processing pipeline performance under various conditions is still a significant research challenge in Computer Vision (CV). Responding to this need, the goal of the group is to study:

- Testing methodologies and frameworks to identify the limit of CV methods with respect to the visual quality of the ingest
- Minimum quality requirements and objective visual quality measure to estimate if a visual content is the operating region of CV
- To deliver implementable algorithms being proof/demonstrate of the new proposal concept of an objective video quality assessment methods for recognition tasks

Recent Publications

- Mehrunnisa, Zhang, Y., Juszka, D., & Leszczuk, M. (2024, September). Comparative Performance Analysis of Deep Learning Architectures in Underwater Image Classification. In *Conference on Radiocommunications and ICT (KRiT)*, Poznań, Poland.
- A. Marie, K. Desnos, A. Mercat, L. Morin, J. Vanne, L. Zhang. “Advanced Fine-Tuning Procedures to Enhance DNN Robustness in Visual Coding for Machines”. EURASIP Journal on Image and Video Processing; September 2024.

Presentation

- Mehrunnisa. Comparative Performance Analysis of Deep Learning Architectures in Underwater Image Classification. AGH University of Krakow. Scheduled as #217 for Monday, 18th November 2024, slot from 14:00 to 16:20 (Europe CET).

Co-Chairs

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