

Quality Assessment for Computer Vision Applications (QACoViA)

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QACoViA Mission and Background

- Mission:
 - To study the visual quality requirements for computer vision methods
- Background:
 - 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 ...)
 - 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 a proof/demonstrate of the new proposal concept of an objective video quality assessment methods for recognition tasks

QACoViA News

- 3rd co-chair:
 - Lu Zhang from National Institute for Applied Sciences (INSA) Rennes, France
- Completing project: “Objective Video Quality Assessment Method for Recognition Tasks” (Huawei Innovation Research Programme) by AGH:
 - Estimation of video processing pipeline performance still posing research challenge in Computer Vision (CV) tasks
 - Showing possibility to deliver objective video quality assessment method for Target Recognition Video (TRV)
 - More info: QACoViA session, Wed. 16 Dec. 14:00 CET

- Starting project: “Image compression for optimized Recognition by distributed Neural Networks” by INSA Rennes/IETR, 10/2020-... :
 - The objective of this PhD thesis project is to address the challenge of minimizing the amount of data transmitted by IoT sensing devices and fed to AI algorithms. A quality metric is necessary in this scenario to define the minimum value that is just high-enough for enabling a correct interpretation by AI techniques.