

Assignment: Ad Image Insertion in Video with Occlusion Handling

Objective: The goal of this assignment is to develop a computer vision solution that inserts a specified advertisement image into a given video, ensuring graceful handling of occlusions during the insertion process.

Scope: Develop an algorithm aimed at inserting a provided advertisement image into a video, paying attention to potential occlusions caused by objects or movements in the scene. Demonstrate a strategic approach to handle occlusions during the insertion process and document it.

Tools and Technologies: Utilize computer vision libraries (e.g., OpenCV, TensorFlow, PyTorch) and any preferred programming language (Python preferred) to outline your approach. Document the tools and versions used in your development.

Resources: We provide an **input video** and **advertisement image** for your testing and development. There will be another video named "**Sample video**", this will help you understand where the advertisement image should be placed and the occurrence of occlusion for which you will be coming up with a strategy to handle. Attached are the **input video**, **sample video** and **Advertisement image** for your reference.

Expectations: The advertisement image is seamlessly integrated with the video and not overlapping with the person's hand movements, after occlusion handling.

Deadline: The submission deadline for this assignment is **08/01/2024 11:59 AM**. Late submissions will not be accepted.

Submission: Submit your code on your GitHub account and share the repository link along with detailed documentation of your strategies employed to handle occlusions, challenges faced during implementation, and any insights gained. The document should be in pdf format[Your_FullName.pdf].

Note: Focus on problem-solving and write robust code with comments. Refer to the Sample video for a better understanding of getting the expected results. The expectation is to primarily use your code. Properly cite any external resources or libraries utilized in your solution.