

EE6310: Image and Video Processing, Spring 2023

Indian Institute of Technology Hyderabad
Course Project Flier

1 Guidelines and Instructions

- Each team can have *no fewer than three students and no more than four students*.
- Scores on all the project components will be awarded team-wise, i.e., the team's score will apply to all the team members.
- Deadlines:
 - **Team formation: 11:59 pm, 17.02.2023.** Please fill in your team's information here.
 - **Preliminary report: 11:59 pm, 13.03.2023.** This report should include a clearly identified problem statement, and a summary of the related literature reviewed. The report must be prepared in the standard IEEE CVF Conference template found here. This report carries 5% of the total grade.
 - **Mid-term report: 11:59 pm, 03.04.2023.** This report should include a summary of any further literature review, results replicated from the literature, and preliminary results from your work. Any code developed/experimented with must be submitted. This report carries 5% of the total grade.
 - **Final report: 11:59 pm, 29.04.2023.** This report should build on the previous reports and present your algorithm, results and conclusions. Your code must be submitted along with this report. This report + results + code carries 15% of the total grade. The work done by each team member must be clearly delineated and the code written by each team member must be appropriately commented.
 - **Project presentation and viva: 01.05.2023 -- 05.05.2023.** The team must present their work and answer questions. The exact schedule for this will be shared closer to the presentation date. The presentation and viva will account for 5% of the grade.

2 Topics

- You are welcome to choose any topic that has either been discussed in class or that is in the tentative topical outline. As mentioned in class, please pick a topic that falls within the purview of the class, i.e., on image/video processing.
- A few topics that are in no way exhaustive: image denoising, image restoration, image inpainting, image generation, image super-resolution, image domain translation, bio-medical image processing (with a focus on low data settings), image segmentation, object detection, image matching, edge detection, image compression (traditional and modern), image quality assessment (for XR imagery), image steganography, image dehazing/deraining, multi-spectral and hyper-spectral imaging, image-based biometrics and forensics, stereoscopic, multi-view and 3D image processing, video generation, video frame prediction, video compression (traditional and modern), anomaly detection, crowd counting, video representation learning, video action recognition, video search, video quality assessment, video quality of experience assessment, video super-resolution, bio-medical video applications, video-based surveillance and tracking...