**Project ID:**

PW23\_MHR\_01

**Project Title:**

Detection of Deepfake Videos

**Team Members:**

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**Objective Of the Project:**

To develop a deepfake detection system that focuses specifically on facial visualization, in order to accurately identify and flag deepfake videos that use deep learning to manipulate facial features. Focus is mainly on image orientation, noise in the dataset and occlusion of images.

**Split Up of Work(Modules):**

1. Literature survey
2. High Level Design
3. Finding and downloading Datasets
4. Checking in-depth implementation of GANs
5. Implementing the current existing models
6. Preprocessing
7. Start implementing the new model
8. Fine tuning the parameters of new model
9. Creating GUI for the project
10. Work on research paper
11. Publish the paper

**Work done in Phase-1:**

* Modules 1,2,3 have been completed
* Literature survey
* High Level Design
* Finding and downloading Datasets

**Plan for Summer:**

* Checking in-depth implementation of GANs to know drawbacks and to find traces left during the creation of deepfakes
* Trying to implement the currently existing models such as multi-attentional maps,expectation maximization etc., to know their pros and cons, searching for the features which we can use in our model and to find what not to use
* Searching for best preprocessing techniques and finalizing them
* If we have sufficient time left, we will try implementing the preprocessing methods

**Plan for 7th sem:**

* Modules 6,7,8,9,10,11
* Doing the remaining part of preprocessing if anything is left
* From the information obtained during summer’s work, we will try implementing different models and test each model
* Selecting the best model and improving its metrics
* Creating GUI for the project,where user can upload a video and check if it is deepfake or not
* Work in the research paper and submit it to conferences and journals