**Image Colorization**

**Batch No. 4 Date:**

**Abstract: -**

Colorizing images has become more than an art technique and is now a real-world application, as more people continue to add extra details in their images. More costly, hectic and time-consuming methods of colorization have now been replaced with advanced technologies such as machine learning solutions. These may not be rendered as optimal solutions, but they offer impressive results. The first part of the project uses simple convolutional neural network architecture. Combining the prediction and input would give us the colorized image which can be converted back to the RGB colour space. Takes the input as images, or webcam feed and generates a coloured output using pretrained weights in OpenCV and DNN module. The second part of the project is focussed on changing the colours assigned to an image. A webpage developed using HTML, CSS, JavaScript in the frontend is integrated with the colourization code gives the output as the coloured image and the colour for a particular object can be changed with colour pallet like a simple paint application with Django in the backend.

**Keywords:** RGB Color Space, OpenCV, Deep Neural Network (DNN), Colorization, Color Pallet, Machine Learning and Deep Learning, frontend (HTML, CSS, JavaScript), backend (Django).

**Team Members:**

18BQ1A0549

18BQ1A0536

18BQ1A0507

19BQ5A0501