

FINAL PROJECT PLAN

Title: Image Forgery Detection using Deep Learning

Objective: Using a convolutional neural network, we can distinguish between the authentic image and the fake image.

Team members:

1. Sreelekha Indarapu (Student ID: 16322036) Section-1 (10 Am Class)
2. Deepak Kumar Chada (Student ID: 16338496) Section-1 (10 Am Class)
3. Sasi Kiran Gandepalli (Student ID: 16336380) Section-2 (1 pm Class)

Roles and Responsibilities:

- Sreelekha and Deepak are responsible for designing and implementing the user designed code on the google colab. They will use Python to upload images and detect the duplicate image which is stored in the GCP Bucket.
- Sasi Kiran and Sreelekha are responsible for storing the image datasets. They will use Virtual Machine and Google Collab to train and test the dataset. They will also set up the GCP infrastructure using GCP Bucket and GCP Server to deploy and manage the platform.

Motivation and Purpose:

- Through newspapers, magazines, the internet, or scholarly journals, the information is distributed in the form of images. It is quite challenging to tell the difference between an original image and one that has been altered because to programs like Photoshop, GIMP, and Coral Draw.
- Handcrafted characteristics are mostly used in traditional methods for detecting image counterfeiting. The issue with existing methods for detecting image tampering is that the majority of them only allow for the identification of a specific form of tampering by means of the identification of a single feature in the image.
- Deep learning techniques are now employed for image tamper detection. Due to their ability to extract intricate information from images, these methods reported higher accuracy than conventional methods. Through this project, we implement a number of deep learning-based image forgery detection techniques.

Cloud Technologies used:

1. GCP Bucket: Any kind of file, picture, video, or even project can be stored using GCP buckets.
2. GCP Server: The Google Cloud Platform (GCP) is a collection of cloud services that provides internal networks, virtual server space, and more.
3. GCP Virtual Machine: Running several applications simultaneously, monolithic applications, app separation, and legacy applications running on earlier OS systems
4. Google Colab: To run the client-side code