

# Fraud Detection

# Iteration 1

- Collect
  - collect data (fake images 200, real images more than 1000)
- Resnet Model
  - trained a resnet based model on real and fake images
    - Result: 84%
- Dino Model
  - Trained a Dino network.
    - Result: 98%
  - Trained a Dino network.
    - Result: 98%
- Analysis
  - Train set and test set should have different images.

# Iteration 2

- Task1: Make smarter fake images such using img-to-img pipelines
- Textual Inversion: Learns from two three images a concept and this concept is converted into a prompt keyword such that having a keyword in the prompt implements the concept into the resulting image.
- SinDDM: based on Diffusion model, a real image is given to the model, user selects at which point should the instructions in the prompt be applied.

# Other Approach

- Using the dataset provided by COCO, in which there are fake images and real images, a Dino based and resnet based and few other networks will be trained.
- The training should focus on identification of artifacts in the fake images.
- The testset will include the images from PropertyExpert and the fake images created by us.
- If good results obtained, then a good direction to pick up, probably.