# Zero Shot Learning Approach by Kalpataru Sahoo

## Introduction:-

Zero shot learning is used for predicting unseen classes in test dataset, while training dataset contains seen data, so when the model undergoes training, it will be trained on seen dataset, but for testing we will have unseen data, and it will detect them also. For ex- consider a images of good water bottles, which are in good condition for train dataset & test dataset can be of good water bottles, and broken water bottles too, using Zero Shot Learning we can detect broken bottles too, pretty amazing right?

Let’s see how it works:-

**Step 1:-**

Importing necessary libraries

**Step 2:-**

This step involves preparation of test and train dataset, by data augmentation, resizing images and loading them into separate folders.

**Step 3:-**

Using VGG-16 for feature extraction from generated image folder and storing embeddings in numpy format.

**Step 4:-**

Loading features in train variable for further splitting the data for train test split.

**Step 5:-**

Setting labels according to features.

**Step 6:-**

Applying train test split on features and labels as a ratio of 80:20

**Step 7:-**

Applying Logistic Regression classifier for training purpose.

I have successfully achieved above steps, but not able to achieve accurate model for zero shot learning as I am facing multiple challenges to select proper models for Zero Shot Learning.

I have pushed code in my github repo   
please find link here: - https://github.com/kalpa23/zslai