Task 3.1

Classifying animals and birds in video clip for wildlife and environmental monitoring can be addressed by using Machine Learning.

* Firstly, we will collect the dataset from all the video clips placed at designated spots within the spots. This dataset will help in identifying the different species of animals and birds. Each image of an animal or bird should be labeled as found in the video clips.
* Then we will preprocess the data that we have procured from the video clips .We will extract frames from the video to create a collection of images. We will edit those images and resize them to an ideal size also the images will be rotated , flipped and brightness will be adjusted to enhance the images quality.
* We will then choose a Machine Learning algorithm for identification of animals from those images that have been extracted from video clips. Most popular algorithm is the convolutional neural networks(CNN) it is pre-trained to use Vgg,ResNet etc. Which have shown great result in image classification.
* As this Algorithm is pre trained in image classification we can feed it the preprocessed data. The algorithm will then learn to identify the species of animals and birds in the data. We will then test the Algorithm by feeding it new data , which will help us to predict the accuracy of the algorithm.
* CNN is used as an algorithm because it is gives accurate results even if the dataset is large and diverse.