Deep Learning

LAB 1 : Yoga Class Analysis using Human pose estimation

Unit: Deep Learning

4 Data Science

2022-2023

DESCRIPTION

The yoga pose image classification problem involves automatically classifying images of people doing yoga poses into different categories. This is an image recognition problem that belongs to the field of machine learning.

The classification model must be able to analyze the images and classify them according to their specific yoga pose, such as mountain pose, head down pose, warrior pose, etc. This can be accomplished using image recognition algorithms, such as convolutional neural network (CNN).

"Yoga is the journey of the self, through the self, to the self." -- The Bhagavad Gita

DESCRIPTION

One of the challenges of the yoga position image classification problem is that the positions may be similar and the differences between them may be subtle. There may also be variations between individuals performing the same positions, which can make accurate classification more difficult.

To address this problem, it may be necessary to collect a large number of labeled images of yoga positions and then train a classification model on these images so that it can be used to classify unlabeled images. It is also important to check the accuracy of the model using validation data, such as images that were not used to train the model.

You have attached a data set as an example to help you perform this lab.

!!! No pre-trained models will be accepted.
You must realize the architectures from scratch.
You must also use the regularization and optimization techniques studied.
Don't forget that the goal is not to have an ideal architecture but to learn how to build an architecture as close as possible to the ideal !!!

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DESCRIPTION

a jyputer file requested, which contains the following steps :

- Business Understanding
- Data Requirements & Data Collection
- Data Understanding & Data Preparation
- Data Modeling & Model Evaluation