Machine Learning Engineer Course Day 25

- Dataset Creation -

DIVE INTO CODE

Thursday October 7, 2021
DIOP Mouhamed

Agenda

1 **Check-in**

2 **Quick Review**

3 **Today's Objective**

4 **Today's Task**

5 **Sample code**

6 **To do by next class**

7 **Check-out**

Check-in

3 minutes Please post the following point to Zoom chat.

Q. What did you learn in the previous week?
   (Anything is fine.)

Quick Review (Faster R-CNN & YOLO v3)

➢ Running the published implementation (Google Colab, Faster R-CNN & YOLO v3, Simpson dataset)

➢ AWS (EC2 – Spot Requests, SageMaker)

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Objectives of this project

Let's do some data creation (Augmentation)!

This is a technique used when there is little data.

Today's Task

Problem 1: Collect images, five at a time. At the end, choose different kinds of dogs and cats with a view to classifying them.

Today's Task

Problem 2: Augmentation. Flipping, changing colors, cropping images.
Generate a different image. There is a link for data expansion.
There is a sample code on GitHub that you can use to get started.

Today's Task

Problem 3: The problem of creating annotations.
There is a tool to create annotations, labelimg.
(There is a video so you can refer to it and decide where to place the annotations.
When you save the file, there is an x-axis and a y-axis.
Get the box coordinates.

Problem 4: Let's expand with the bounding box attached.

Sample code

How to solve problems
"Deep Data Expansion"

[Problem 1] Learning to classify with your own dataset
[Problem 2] Data augmentation for classification datasets
[Problem 3] Preparing an object detection dataset
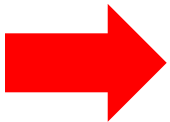[Problem 4] Data expansion for object detection datasets

Sprint 18 – Dataset Creation

Explanation about this Sprint is given but please try it on your own first.

Sprint 18 – Dataset Creation

Please work on your own after class and
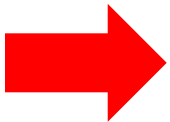submit your assignments on DIVER.

Sprint 18 – Dataset Creation

A Sample Code of this Sprint is given but please try it on your own.

Sprint 18 – Dataset Creation

Please work on your own after class and submit your assignments on DIVER.

ToDo by next class

Next class will be Zoom : Thursday October 14, 2021 19:30 ~ 20:30

🚨ToDo: U-net
https://diver.diveintocode.jp/curriculums/1962

Check-out

3 minutes Please post the following point to Zoom chat.

Q. Current feelings and reflections
(joy, anger, sorrow, anticipation, nervousness, etc.)

Thank You For Your Attention