Week 5

Amir Fawwaz

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Overview

In week #3 and #4, you have learnt basic ***data science*** work via titanic tabular dataset and ***image classification*** using cat vs dog dataset.

Now, we let's extend our ML work on advance computer vision problem.

Task 1

1. Base on your work on *Dogs vs. Cat* , plot similar plot like Figure 1

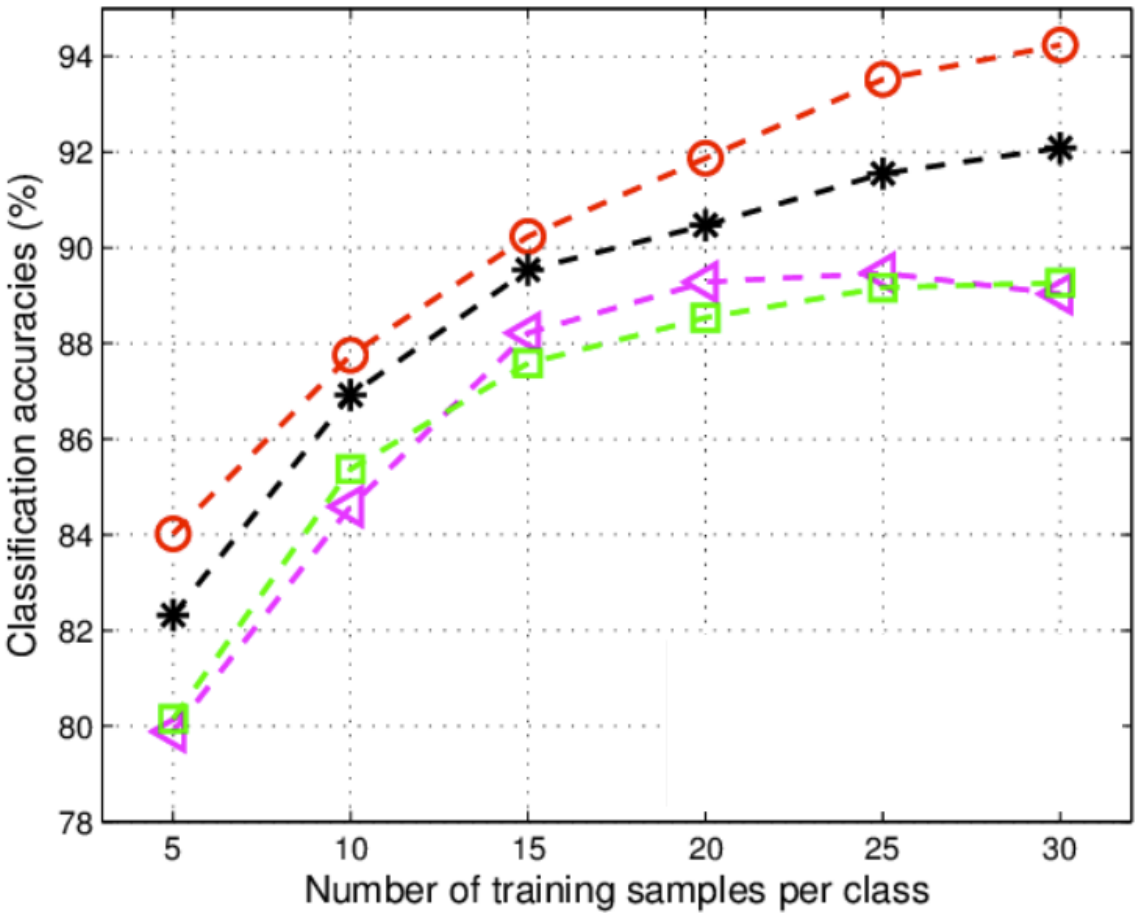

Figure 1: accuracy vs number of samples

Use number of sample per class as the following: 10, 100, 250, 500, 1000, ... maximum

Number of image per class	Training Accuracy	Training Loss
10	?	?
100	?	?
250	?	?
...	...	...
max	...	...

Task 2

Discuss with Mark & Afif on how to perform object detection using Yolo.

Objective: Detection of cheque logo with *accuracy* $\geq 80\%$

- similar with *task #1*, label cheque logo images at least up to 500 images
- train Yolo object detection using *GPU* and get the plot similar with Figure 1.
- summarize all the work in *task 2* into *workflow* or *diagram*

Task 3

Repeat task #2 but using detecto

Note: if image is not enough, perform simple image augmention

Task 4

Apart from YoLo and detecto, please list all popular object detection API/libraries (based on pytorch or tensorflow) and sort the list according to ease of use.

Note: For all jupyter notebook, follow python coding guideline from (https://peps.python.org/pep-0008/)