MASTER 2 - DATA SCIENCE

25313 - 2019

Annexes

TABLE OF CONTENTS

Productions

1.1 Initial project

1.1.1 Description & Link

Initial project that uses Tensorflow Models as a git submodule. A script takes as argument a path, it will search for all images and videos there, will output:

- For each species
  - Occurences

https://github.com/louis030195/vision_api

1.2 Main project

1.2.1 Description & Link

- Computer vision pipeline runnable on Google Cloud Platform.
- Easy to deploy
- Easy to maintain
- Easy to scale
- Easy to price
- The readme file include full instructions to install it and much more information. Multiple Dockerfiles to ready-to-deploy environment, Gitpod one-click ready-to-code container.

https://github.com/louis030195/vision-client

1.3 Microsoft CameraTrap contribution

1.3.1 Description & Link

Full Google Colaboratory notebook detailed showing an example usage of their tools and especially on wolves and lynxes It uses Google Image API to query for random images about camera trap animals, therefore close to real context.

https://github.com/microsoft/CameraTraps/pull/68

1.4 Tensorflow Models fork

1.4.1 Description & Link

Tensorflow Models fork to allow exporting with a key as input and output

(indispensable for AI Platform batch predictions, may be useful for Tensorflow-serving apps)

Will probably be sent as a pull request once the code is cleaned.

https://github.com/louis030195/models

1.5 Google Colaboratory notebook to modify, exchange and test an object detection graph

1.5.1 Description & Link

https://colab.research.google.com/drive/1CZxrvowmuzwfJJoUBjgIjsIpb-1gh53h

1.6 Google Colaboratory notebook - Annotations mapping

1.6.1 Description & Link

Google Colaboratory notebook to pull annotations mapping from Tensorflow Dataset and push it into Datastore Class entity

https://colab.research.google.com/drive/1JLJt4tUXNgeuq3Y9PPvZitBS2B7J7Ker

1.7 Thesis source code

1.7.1 Description & Link

LaTeXwritten thesis https://github.com/louis030195/thesis