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Why did I choose the Image labelling topic?

Natural Language Processing & Computer Vision are very popular in the machine learning field. So I decided to explore those fields. Also worked on NLP and builded models, so today I am excited to explore the computer vision field. People often face the problem of managing lots of images, screenshots. After showing this problem my first approach is to identify text from it then label it. Although using computer vision and deep learning capabilities we can achieve the best result through, it is because starting of my computer vision journey as an intermediate machine learning engineer i decided to start with this model.

Objective of the Study

The main objective is to develop a ML model that can extract textual information from an image and make a full summary of it, based on it rename or label each and every image. Data engineers often face this type of image labelling by this model that task will automate.

Some glimpse of my Research i did to develop this type of model

- **Trending machine learning topic.**

I found Machine learning (AI) itself a trending topic in technology, it includes a wide range of topics like computer vision, NLP, generative AI, deep learning and quantum computing.

- **What is computer vision**

It is a field of AI that enables computers / systems to understand images and extract useful insights from it. In my project it helps me to extract text from images. Although it has the capability to identify and understand objects from images, at this moment I'll start with basics.

- **Are there any existing tools available for the same problem ?**

As expected there is lot of model provides different types features, one of tool *V7* are uses advanced computer vision it complete borders the object and based on it labels image. Labelbox, scale AI, Dataloop, playment etc. all have their own capabilities. In my type of model it can help to rename pdf documents in a bunch.

- **Limitations and goods of existing tools**

It can be expensive to use for individuals, but for organisations it is a lot more useful, like *V7 labs* provides dynamic interaction of visual 3D-2D images. It uses complete interaction of AI to achieve high results.

Some references that help me to complete this project.

- https://www.ibm.com/topics/computer-vision
- https://www.v7labs.com/blog/best-image-annotation-tools
- https://www.geeksforgeeks.org/text-detection-and-extraction-using-opencv-and-ocr/
- https://www.thepythoncode.com/article/text-summarization-using-huggingface-transformers-python

Thanks