FAST-NUCES

BSCS (Computer Science)

Machine Learning

CAMTRANS

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Abstract

Machine Learning and Deep Learning is growing vastly these days. Models can learn a lot faster than a new born baby. Metaphorically they can go from new born baby to a PHD level Doctor in just a matter of weeks. They can classify things in categories as well as predict the future via regression. Using these concepts we can also read text from images with accuracy dependent upon the dictionary we provide.

1 Introduction

Outline   Given we have an image taken from an i-phone contains some text. Our target is to extract that text from the image.

1.1 Topic

Using tools tesseract and vision we will extract text from an image

1.2 Rationale

The reason for this project is to achieve maximum acuuracy in reading text from an image.

1.3 Additional Information

We cannot convert the the text because google library is not available for free.

2 Statement Of Purpose

2.1 Tools

We are using the following tools

    1 Python

    2 Keras

    3 Tensorflow (GPU Based)

    4 Xcode(Compiler)

    5 Tesseract

3 Basic Discription

Using vision api we will get the text part from the total image. If there are more then one positions (OCR) not together , with text then every textual area will be dealt as a differnet image. This image is further dealt with the Tesseract to extract the text from the images.

4 Discussion

4.1 Factual Review

We are getting an accuracy of 99.23 percent since we are using tesseract which is a very good tool for our job

4.2 Personal Assessment

Our model is very much dependent on the dictionary of font we provide. If large dictionary with multiple fonts is provided then our chances of extracting more textual data of different from an image will become possible.

5 Conclusion

This model is effective when if large dictionary with multiple fonts is provided then our chances of extracting more textual data of different from an image will become possible.

6 References

1 https://en.wikipedia.org/wiki/Tesseract

2 https://cloud.google.com/vision