NUS CS4243: Computer Vision and Pattern Recognition November 5, 2019

Where's Waldo Detector using Computer Vision

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Abstract

This report describes our group's implementation of a computer vision algorithm to detect Waldo, Wenda, and the Wizard from a series of "Where's Waldo" books. The goal of this project is to detect the three characters from the provided high-resolution images, which can be very complex with a lot of detail and many other characters. The three characters also may or may not appear in any given image.

Briefly describe the problem, the challenges, your proposed solution and achieved results.

1 Introduction

Problem statements. The definition, and the challenges..
Any existing methods [1], their downsides..
Your proposed approach to solve the challenges..
Highlight any particulars (contributions) in your solution..

- We propose xxx
- We achieve xxx

2 Proposed Solution

Give an overview of your solution, put it in a framework. Then, detail each part in the framework.

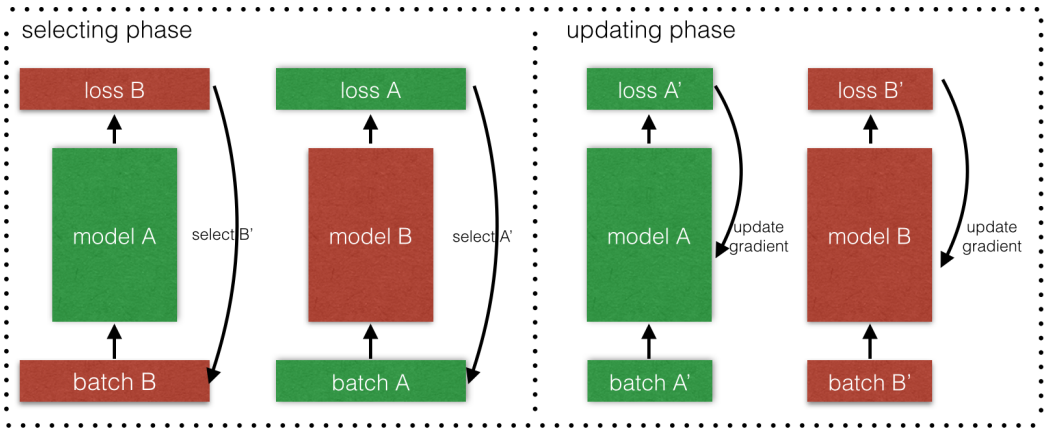

Figure 1: Our proposed solution.

3 Experiments

3.1 Data Preparation and Configuration

Specify how to process the data, how to evaluate the performance (e.g., mAP).

Dataset	#train	#test	#Category
MNIST	60,000	10,000	10
CIFAR-10	50,000	10,000	10

Table 1: Summary of datasets.

3.2 Implementation

Give a figure to illustrate your implementation, then detail each parts.

3.3 Results

Present the results, both qualitatively (visualize) and quantitatively (specific numbers).. Analyze the results

3.4 Discussion

Strengths and weakness in your method.

4 Conclusion

In this project, we ...

5 Group Information

Member	Student ID	Email	Contribution
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Table 2: Group member information.

References

[1] Jia Deng, Wei Dong, Richard Socher, Li-Jia Li, Kai Li, and Li Fei-Fei. Imagenet: A large-scale hierarchical image database. In *2009 IEEE conference on computer vision and pattern recognition*, pages 248–255. Ieee, 2009.