

Letter Localization

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Abstract—The abstract of this paper.

Index Terms—letter, localization, SVM, HOG, IoU

I. INTRODUCTION

Computer-printed letters can be found everywhere in our cities, e.g. on traffic signs, stores and advertisement posters.

This paper is dedicated to the question how to find these letters on any input image using Machine Learning. To keep it more simple, we only want to detect the 62 characters 0-9, A-Z, a-z. Although it is true that our detector might also be able to detect some hand-written letters, we restrict our search space to the computer-printed versions of the letters. Also, we are only interested in the locations of the letters, not in their classification. Another restriction is that we only use rectangular bounding boxes and we do not take into account that a letter may be rotated.

II. DATA

A. Image selection

B. Image manipulation

C. HOG features

D. Features from image segmentation

III. MODELS

A. Support Vector Machines (SVM)

B. Cascade Object Detector

IV. EVALUATION

A. Non-maximum suppression

B. Intersection over Union (IoU)

V. FRAMEWORK

REFERENCES

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