Image Processing and Computer Vision
The Dartboard Challenge

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Abstract

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1 Viola Jones Object Detector

1.1 Ground Truth and Visualisation

1.2 IOU, TPE, F1-Score

2 Building and Testing a Detector

2.1 Training Performance

2.2 Testing Performance

3 Integration with Shape Detectors

3.1 Hough Details

3.2 Evaluation

3.3 Detection and Pipeline

4 Improving Our Detector

4.1 Idea

4.2 Visualize

4.3 Evaluate

(a) dart4.jpg

(b) dart5.jpg

(c) dart13.jpg

(d) dart14.jpg

(e) dart15.jpg

Figure 1: Five result images with bounding boxes of the ground truth (in red) and actually detected instances (in green) drawn around frontal faces