1 Introduction: object detection promise, DNN advantage(accurate) and dis(slow )(why: too much redundant parameters), SSD advantage and dis.

We propose a new function to overcome these dis to make DNN faster without accurate dropped sharply.

2 Recent work: cut branch, compress, distilling, lightweight framework: shufnet, mobilenet etc.

Cut branch

Advantage: could cut much parameters.

Dis: cut metric is hard to set and implement is complex and real speed up is not much

Compress:

Advantage: could decrease model size sharp

Disadvantage: speed up is rare.

Distilling

Advantage:

Disadvantage: need a good model first, the process and result is black box

Lightweight framework:

Advantage: small cell has been optimized and makes state of the art performance. Architecture is clear and easy to organize and extend.

Dis: Architecture’s organize principle is summarized from rather much lab data.

3 My function

Make a cascade filter:

Merge into mobilenet ssd lite.

4 experiment data and compare

Performance describe:

Compare with original:

Compare with other state of the art:

5 conclusion

We make a new function.

Advantage:

Improvement could make later:

6 inference: