

# Title

## Abstract

## 1 Introduction

- First,
- Second,

## 2 Related Work

In this section, we briefly review ...

## 3 Proposed PRNN Model

In this section, we introduce our proposed model **Model name**. We first present the notation and the problem definition, then detail the proposed model throughly. Finally we demonstrate the ....

### 3.1 Problem Definition

### 3.2 Our Proposed Model

## 4 Experiments

We test our model on ... datasets and compare our approach with .... Besides, we study how different factors influence the performance with several ablation studies.

### 4.1 Datasets and tasks

- PASCAL VOC 2007/2012
- ImageNet
- Microsoft COCO
- ILSVRC

### 4.2 Protocols

What's protocol? Is it some data detail, such as store space, dimension and properties?

- TODO

### 4.3 Metrics

In this section, we will introduce some metrics used in fore-mentioned detection datasets and tasks.

- **mean Average Precision(mAP)**
- **recall@K**
- **FP, TP, RoC and AuC**
- **Intersection-over=Union (IoU) overlap**
- **Parameterizations of something**
- **FLOPS** One multiplication followed by one addition.

### 4.4 Hyper-parameter

Training setting will be detailed in this section.

- **Initialization** The XXXNet can be trained end-to-end by backpropagation and *stochastic gradient descent(SGD)*. Draw weight from zero-mean *Gaussian distribution* with standard deviation 0.01.
- **Batching, sampling and Pruning** The sampled positive and negative samples have a ratio of up to 1 : 1.
- **Optimizer/Solver** We use a *weight decay* of 0.01 and a *learning rate* of 0.001. We use *momentum* for the first 60w data.
- **Implementation platform** Our implementation uses Caffe/ TensorFlow etc.[C]

### 4.5 Method Comparison

The methods in comparison and their settings are listed as follows:

- **benchmark1** is a well know method for ...

**Results** Results of all methods are illustrated in Tables [R], respectively, from which we can see that performance

### 4.6 Ablation Studies

The core idea of XXXNet lies in *Aspect A*, *Aspect B* and *Aspect C*, referenced in Sections [R] and [R]. In this subsection, we evaluate them respectively.

**Aspect A**

**Aspect B**

**Aspect C**

## 5 Conclusions

## References