Object detection + Classification

Problem statement

1) Model an **RPN Network** that can **detect** (bound the object) [bounding box] and classify **5 classes** from the given dataset and **the rest of the class objects as unknown objects**.
Dataset: http://www.vision.caltech.edu/Image_Datasets/Caltech256/
Classes: 018.bowling-pin, 024.butterfly, 050.covered-wagon, 064.elephant-101, 087.goldfish, Unknown(rest of the classes)
2) The model should be less than **50 MB.**
3) The model should be having a **minimum** recall and precision of **0.90 and 0.95** respectively.
4) The score metrics that **should be provided** are precision, recall and accuracy for each **class individually and also for the combined model.**

Caveats:

If you think your system can't handle training the model, then use https://colab.research.google.com/

Instructions

1. Submit using the method mentioned below.
2. Your submission should contain a detailed instruction in README.md, to help us understand and run your assignment at our end.
3. Don't include any library files, instead provide instructions on how we can install at our end.

Judgement:

The evaluation will be based on the model's the following criteria,

Parameter	Weightage
1) Novelty	0.3
2) Accuracy	0.3
3) Model Size	0.3
4) Code Clarity and Documentation	0.1

Constraints:

You are free to use any language or frameworks of your choice, but your README should be very detailed and should contain all relevant information.

Submission:

Time allotted: 8 hours

Zip your directory as per instructions above and upload on the google form provided on mail.