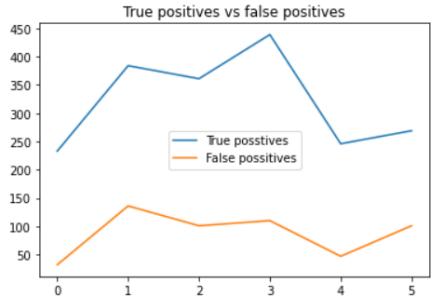
Testing model

After the meeting I started running inference on the custom trained model. For this purpose I ran the model on various images and videos that contained various objects like umbrellas, cows, motorcycles.

True positive vs false positive:

```
[ ] import matplotlib.pyplot as plt
    plt.plot(TP, label = 'True posstives')
    plt.plot(FP, label = 'False possitives')
    plt.title('True positives vs false positives')
    plt.legend()
```

```
<matplotlib.legend.Legend at 0x7f773f0bac50>
```

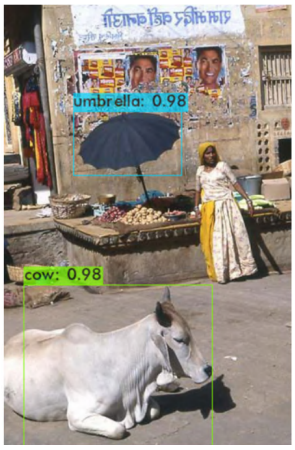


calculated mAP:

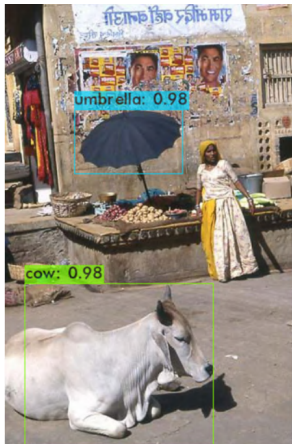
```
 detections_count = 14505, unique_truth_count = 2097
class_id = 0, name = aeroplane, ap = 96.02%       (TP = 233, FP = 32)
class_id = 1, name = birds, ap = 88.62%           (TP = 384, FP = 136)
class_id = 2, name = boats, ap = 89.68%           (TP = 361, FP = 101)
class_id = 3, name = cow, ap = 94.57%             (TP = 439, FP = 110)
class_id = 4, name = motorcycle, ap = 95.70%      (TP = 246, FP = 47)
class_id = 5, name = umbrella, ap = 90.88%        (TP = 269, FP = 101)

 for conf_thresh = 0.25, precision = 0.79, recall = 0.92, F1-score = 0.85
 for conf_thresh = 0.25, TP = 1932, FP = 527, FN = 165, average IoU = 58.24 %

 IoU threshold = 50 %, used Area-Under-Curve for each unique Recall
 mean average precision (mAP@0.50) = 0.925797, or 92.58 %
```

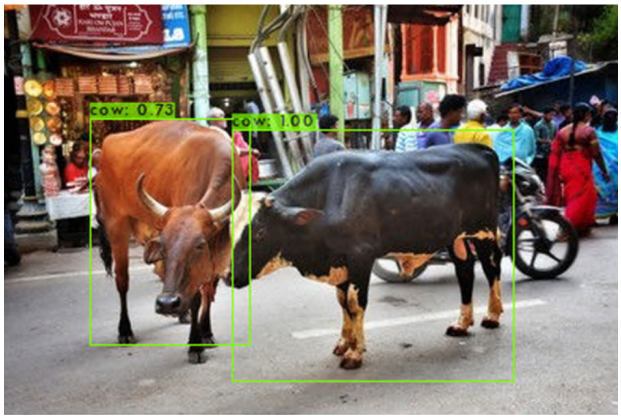
Images:

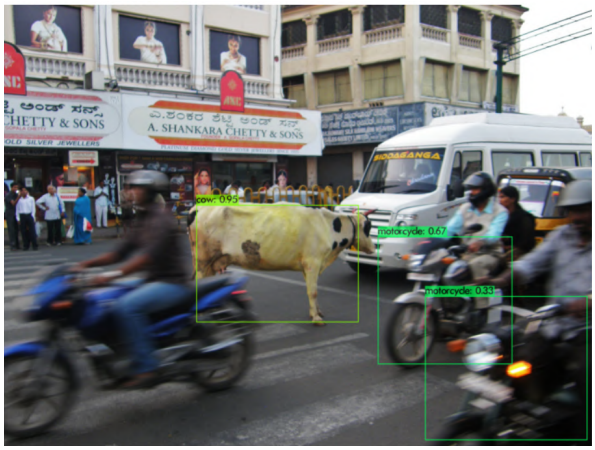

umbrella: 0.81
cow: 0.92


umbrella: 0.98
cow: 0.98


umbrella: 0.99
cow: 0.99

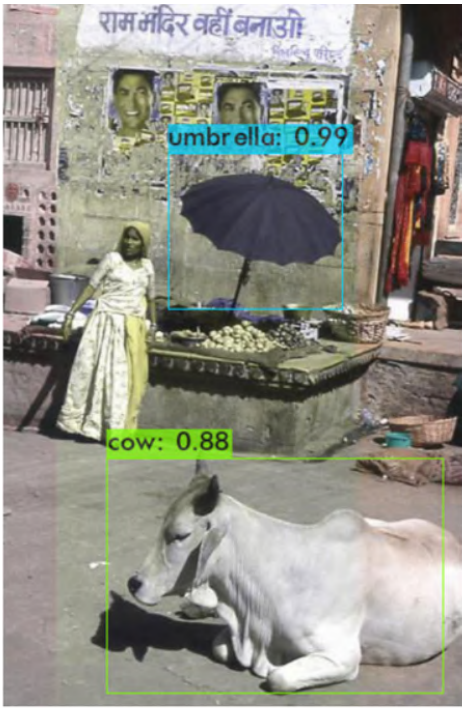

umbrella: 0.98
cow: 0.98


cow: 0.73
cow: 1.00


A. SHANKARA CHETTY & SONS
cow: 0.95
motorcycle: 0.67
motorcycle: 0.33

birds: 0.84
A. SHANKARA CHETTY & SONS

A. SHANKARA CHETTY & SONS
motorcycle: 0.70
motorcycle: 0.34




```
[ ] plt.plot(fps_motor, label = 'FPS')
    plt.plot(acc_motor, label = 'Motor confidence')
    plt.plot(acc_cow, label = 'Cow confidence')
    plt.title('Motorcycle vs COw')
    plt.legend()
```

```
<matplotlib.legend.Legend at 0x7f773eea7fd0>
```