

**CASE STUDY**

**SEMI AUTOMATED ANNOTATION USING CVAT (COMPUER VISION ANNOTATION TOOL)**

**BUSINESS IMPACT**

Model Accuracy 80%

Model File Size 300 MB

**CUSTOMER KEY FACTS**

Size: 30 + employees

Industry: Roadside traffic, Surveillance systems, CCTV footages

Location: Bangalore, Karnataka

**PROBLEM CONTEXT**

Data annotation is a very important challenge for any industry to detect and track the object present on the scene. During earlier times it was manual process wherein people were manually drawing the boxes and identifying the objects. E.g., Car, cyclist, person, etc. So, it was a tedious task for them to perform this activity. We wanted to vanish this manual annotation process by introducing semi-automated annotation and enhance the customers by providing a one stop AI solution.

**CHALLENGES**

* Fully automated annotation process is not supported
* Annotation on large size videos take more time due to more frames
* Proper marking of the boxes in some small size images

**TECHNOLOGIES USED**

CVAT Annotation tool, nuclio, OpenVINO framework, Machine learning algorithms like YOLO v4 (You Only Look Once), FasterRCNN, MaskRCNN

**SOLUTION**

TPRI worked on annotation model based on machine learning algorithms to provide most accurate annotation. This tool helps in marking the objects in any shape like bounding box, polylines, landmarks, etc. This will definitely help the surveillance departments, Perimeter Intrusion Detection System (PIDS) to use the model and identify the intruder. It will save the amount of work of man force and also increase the productivity of tracking all the objects in an effective manner.

**RESULTS**

* Model gives accuracy up to 80%
* Freely available open-source annotation tool
* Easy to use solution
* Greater cost and time savings