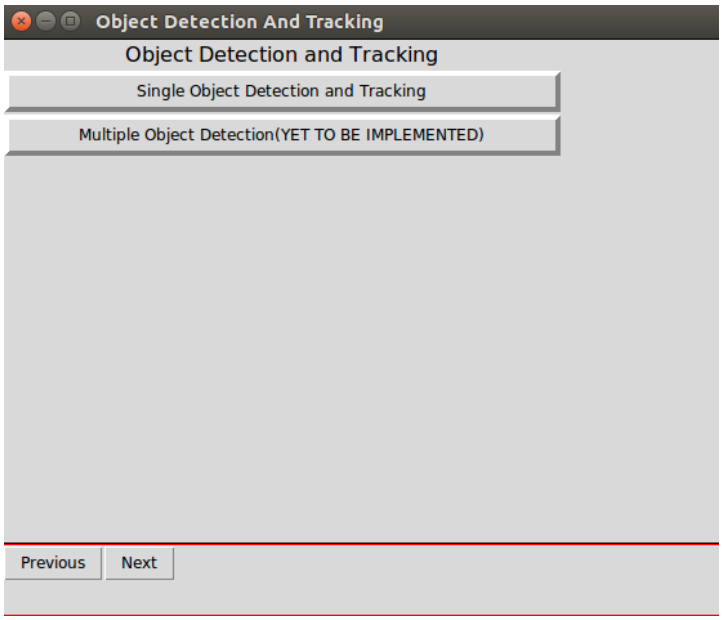
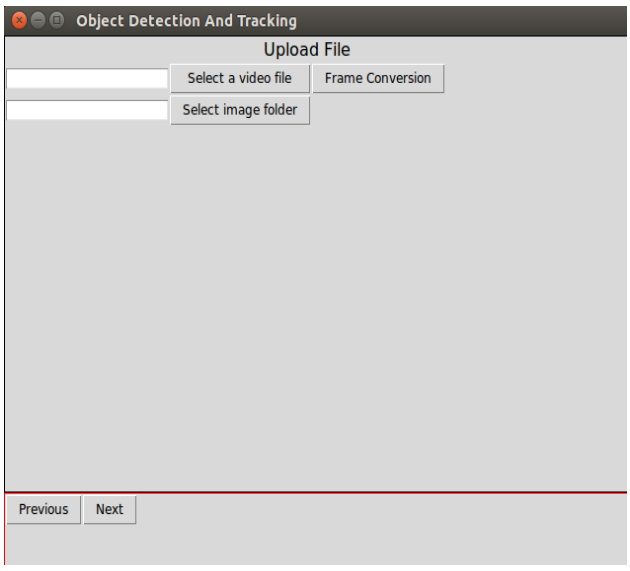
This GUI focus on object detection and tracking using deep learning with UAV videos

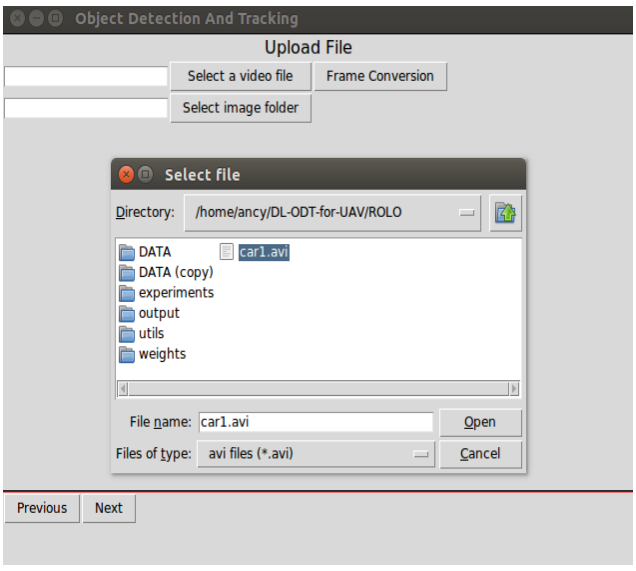
1. Choose **Single Object Detection and Tracking**

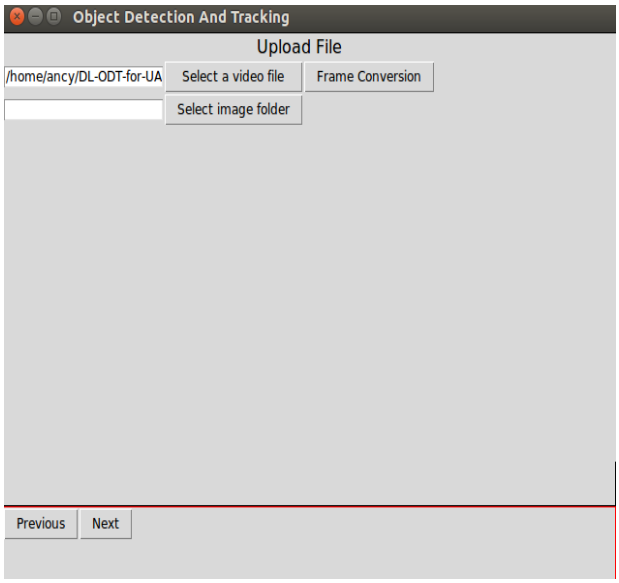


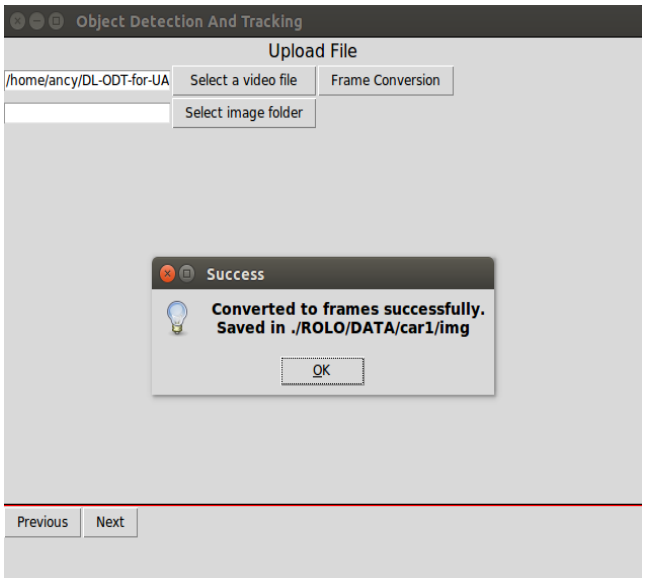
2. Choose video file or image folder:

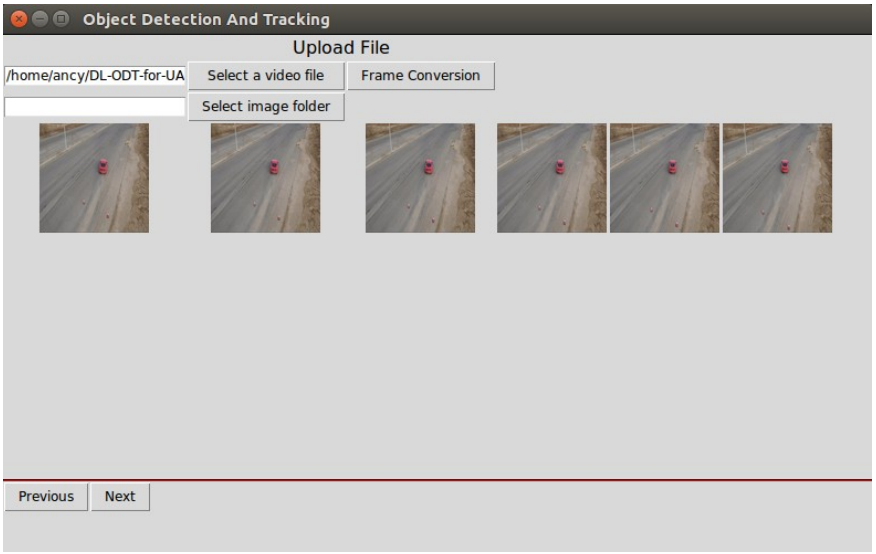
- To upload video choose -> **Select a video file**
- To convert the video to frames choose -> **Frame Conversion**
- Generates frames at ./ROLO/DATA/videofilename/img
- After File selection choose **Next** for annotation



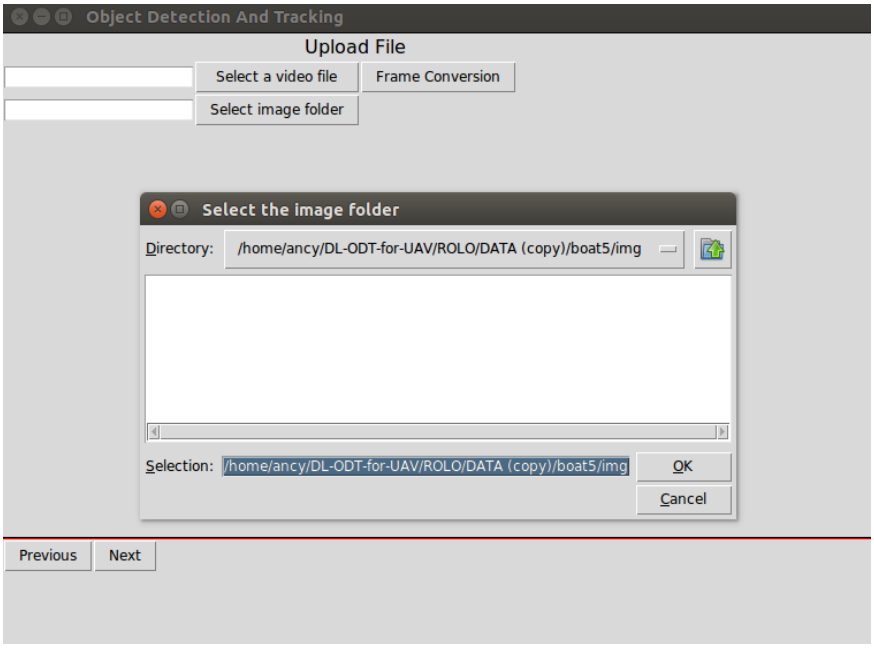






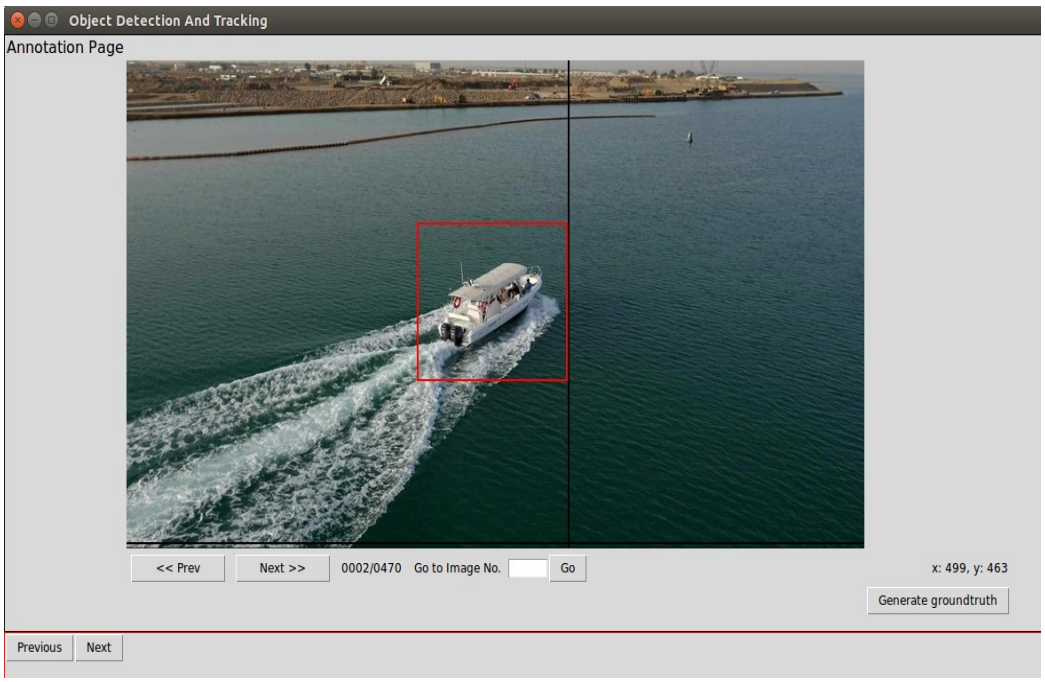


- To upload the existing video frames choose the folder which contains images -> **Select image folder**
- After File selection choose **Next** for annotation

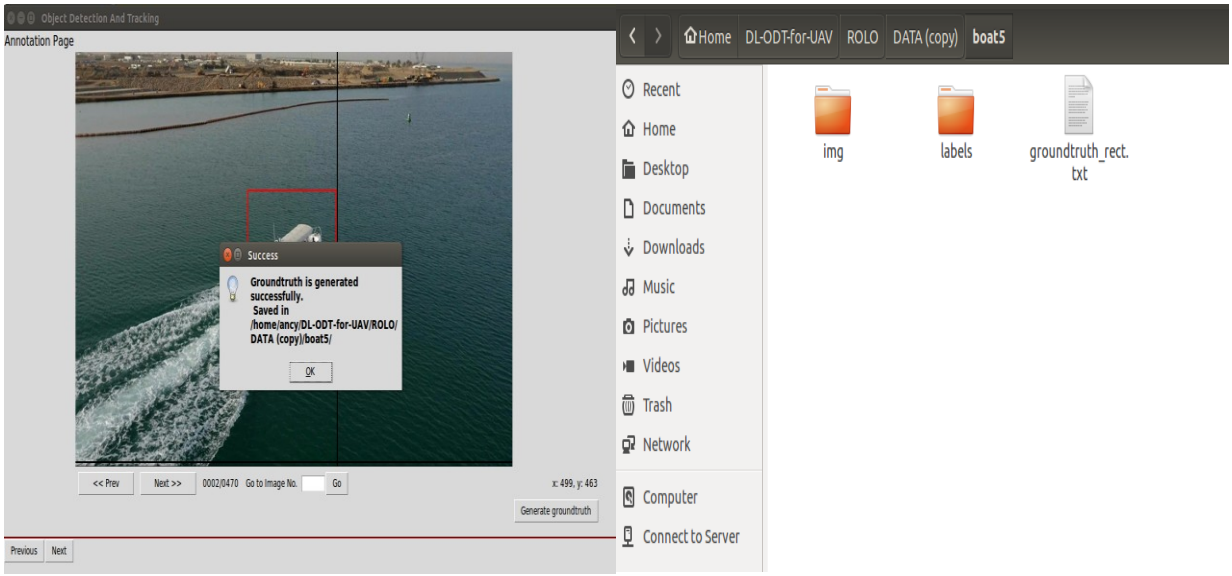


3. Annotation

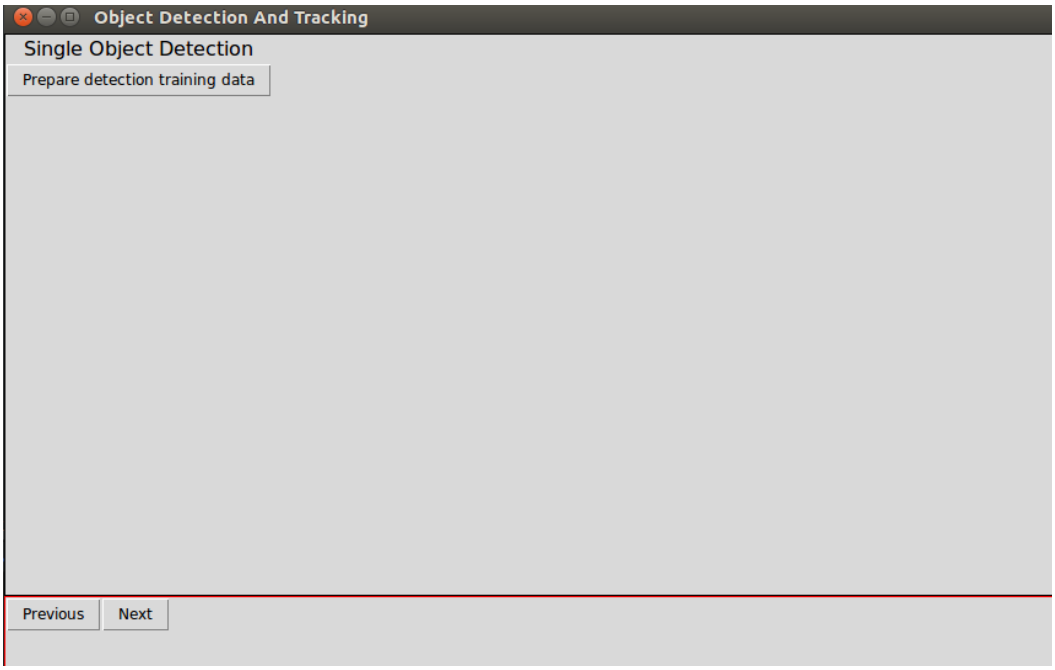
- The selected file folder will load in annotation page
- To annotate -> click to draw the box -> release and click to finish the box
- **Next>>** -> loads the next image
- **<<Prev** -> loads the previous image
- **Go to Image No.** and **Go** ->loads to the specified image



- After annotating all the images click **Generate groundtruth**. It generates groundtruth_rect.txt for the loaded images at ./ROLO/DATA/videofilename/groundtruth_rect.txt
- Click **Next** for object detection



4. Click **Prepare detection training data.** Generates numpy files at ./ROLO/DATA/imgfolder/yolo_out
    - After preparing the data click -> **Next** for training LSTM



5. Click **Training** to train the LSTM model
6. Click **Testing** to test the model
7. Click **Tracking** to visualize the demo