Algorithm 1: Algorithm to detect and track airborne UAVs

Data: *Realtime Image Frames*
Result: *Bounding Box Coordinates of the UAV*
$cnt \leftarrow 0$;
$detection\_initiated \leftarrow False$;
$object\_detected \leftarrow False$;
$rect \leftarrow [0, 0, 0, 0]$;
$frame\_per\_detection \leftarrow N$;
while *True* **do**
  $frame \leftarrow$ *current frame of the stream*;
  $cnt \leftarrow cnt + 1$;
  if *cnt%frame_per_detection = 0 or not detection _initiated or not object_detected* **then**
    $detection\_initiated \leftarrow True$;
    $rect \leftarrow object\_detection\_model(frame)$;
    $tracker \leftarrow Tracker\_initializer(frame, rect)$;
    $Tracker\_is\_initilized \leftarrow True$
  else
    if *Tracker_is_initilized is True* **then**
      $rect \leftarrow obejct\_tracking\_model(tracker, frame)$;
      if *score of the tracking of the tracking* $\leq threshold$ **then**
        $Tracker\_is\_initilized \leftarrow False$;
        $object\_detected \leftarrow False$;
        continue
      end
    else
  end
end