

Authors:

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How to use the algorithm:

When selecting the algorithm, it is recommended not to pipe the algorithm into the output of other algorithms. The algorithm will place bounding boxes around objects in each image specified in a batch. These objects must meet a threshold which is specified as a parameter to the algorithm.

Algorithm selection:

This algorithm may be chosen when the user wants to quickly know if there are people in an image. The performance of the algorithm depends heavily on the specified threshold parameter. This algorithm is best used with high resolution images where a person may not be able to analyze the image as quickly as the model can.

Parameters modification:

The default threshold for PersonThreshold is 0.5. This value can be changed such that objects which have a smaller probability of being a human are also identified as a human. For example, a threshold setting of 0.4 will identify more objects as people even when the model is unsure about its conclusions.

The following are examples of the algorithm being run with different thresholds.

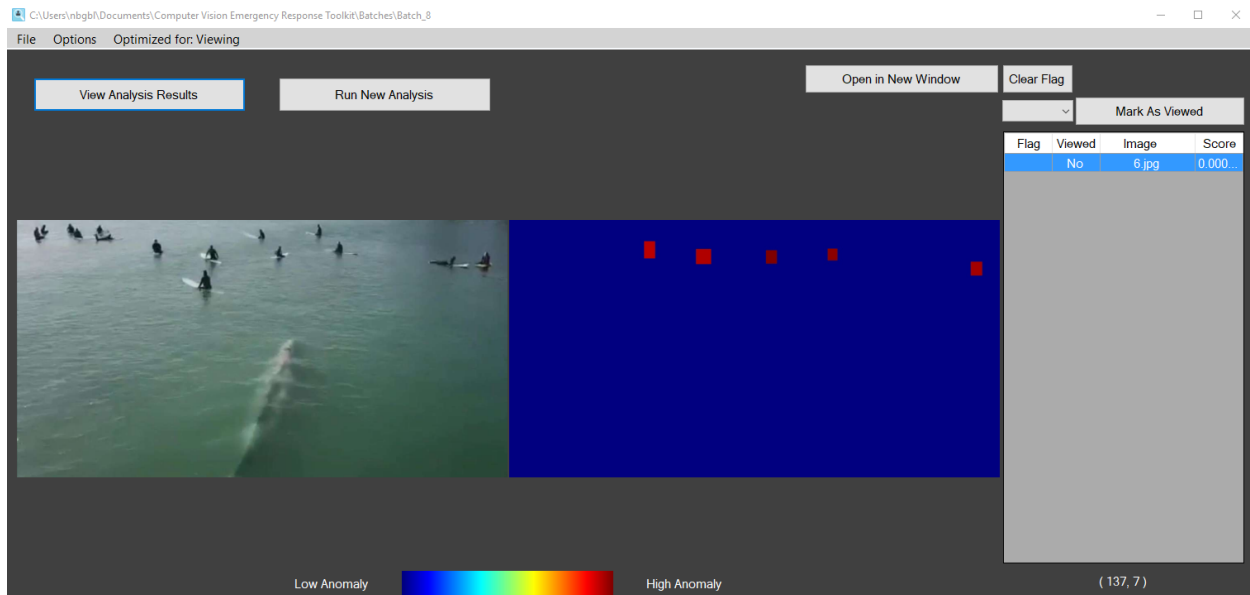
PersonThreshold of .99

The screenshot displays the 'Computer Vision Emergency Response Toolkit' interface. The window title is 'C:\Users\nbgbl\Documents\Computer Vision Emergency Response Toolkit\Batches\Batch_5'. The menu bar includes 'File', 'Options', and 'Optimized for: Viewing'. The main interface has a dark background with several buttons: 'View Analysis Results' (highlighted in blue), 'Run New Analysis', 'Open in New Window', and 'Clear'. Below these buttons is a large image of a body of water with several people. To the right of the image is a large red rectangular area. At the bottom of the image, there is a color scale bar ranging from 'Low Anomaly' (blue) to 'High Anomaly' (red). On the right side of the interface, there is a table with the following data:

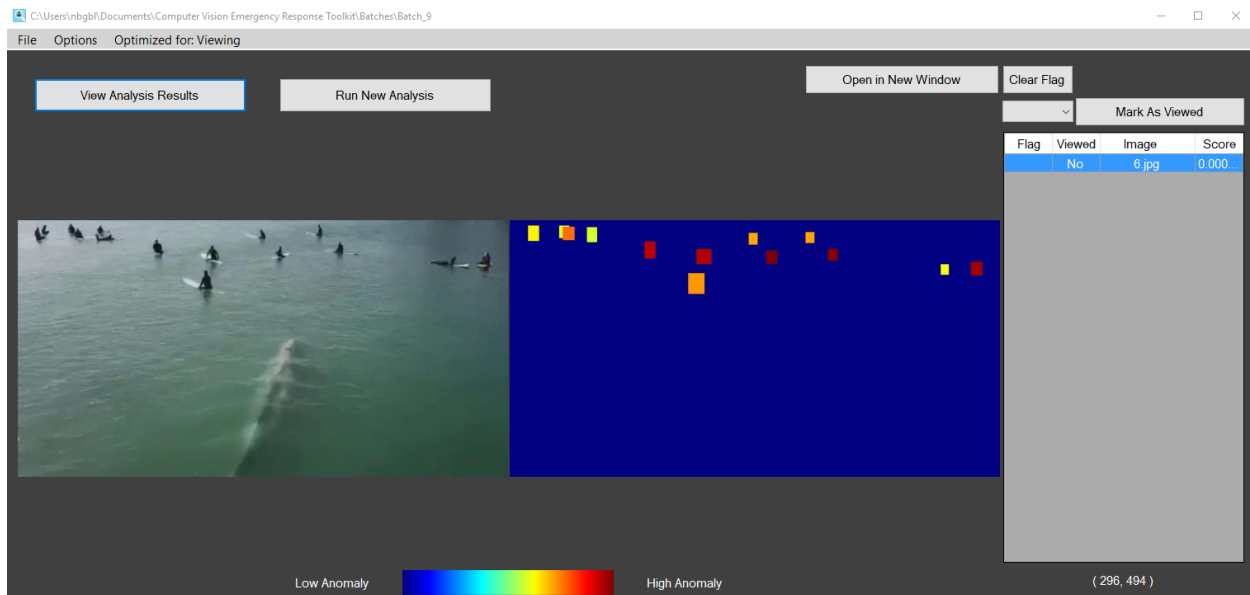
Flag	/iewec	Image	Score
No		6.jpg	0.0...

Below the table is a 'Mark As Viewed' button. At the bottom right of the interface, the text '(7, 262)' is displayed.

PersonThreshold of 0.7



PersonThreshold of 0.4



Notes: Before building the project in Visual Studio, please verify that the 'yolov3.weights' file is present in the 'Computer-Vision-Emergency-Response-Toolkit-CVERT-Competition-Master\Computer Vision Toolkit\Computer Vision Toolkit\lib\Algorithms' folder . If it is not present, it can be downloaded from <https://pjreddie.com/media/files/yolov3.weights>.

Credits:

The authors acknowledge the open source community for providing source code in the development of algorithms for this project.

<https://github.com/experiencor/keras-yolo3>