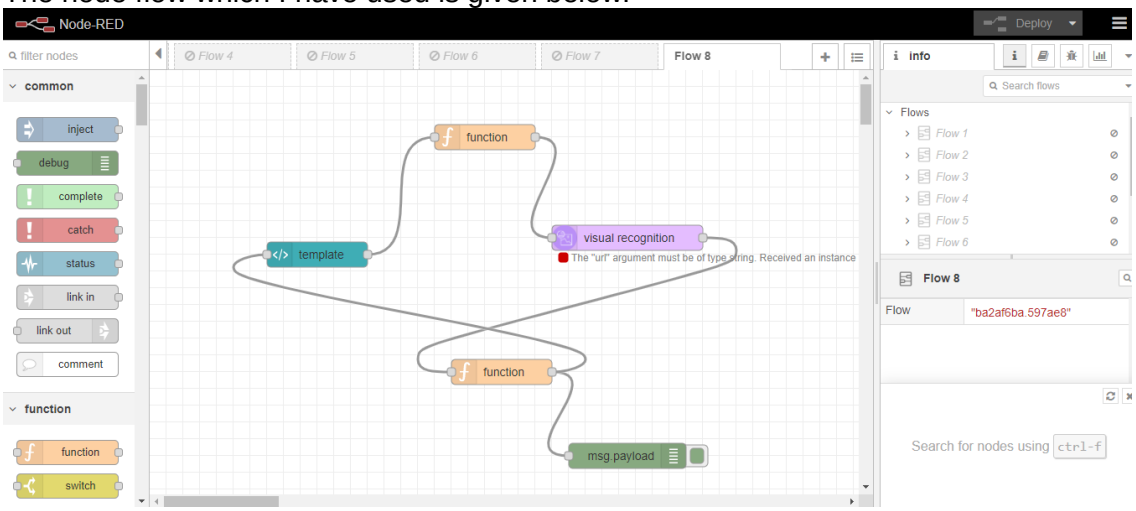
Introduction

The topic of this project is to create a web application to track workplace condition to ensure employees safety in warehouse using visual recognition. I have created a visual recognition model using Watson studio in IBM cloud and have integrated it using Node-red. Both the classes (i.e. with helmet and without helmet) were created using Watson studio. Finally to create the UI for the model I used Node-red.

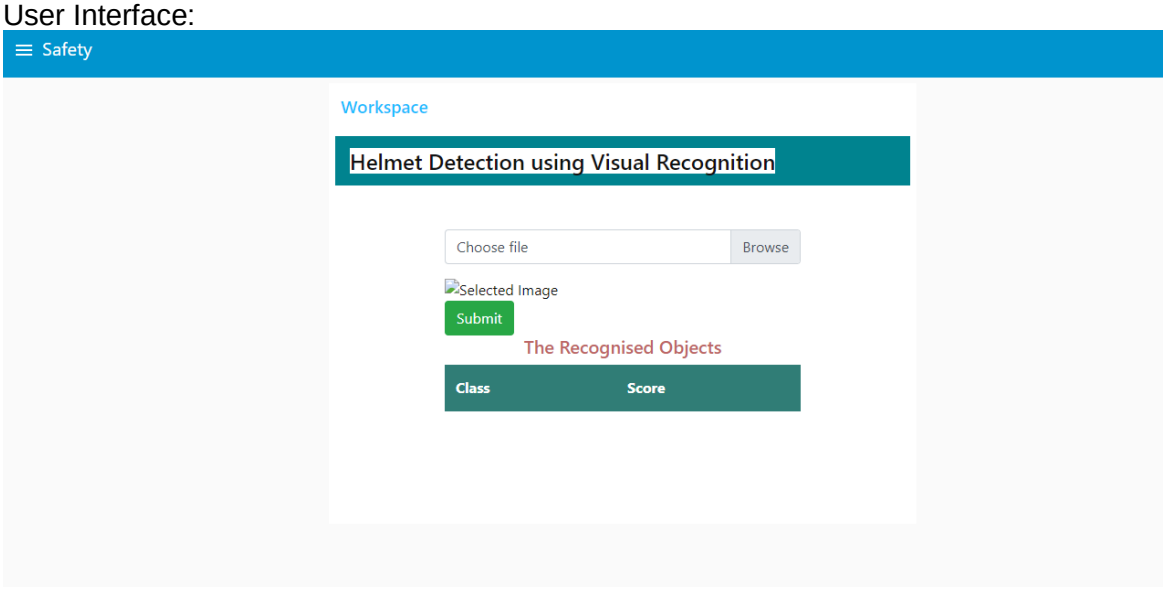
Node-RED

To create the UI for the model I have used the visual recognition node and the function nodes to connect with my trained model.

The node flow which I have used is given below:



User Interface:



Result

The model was successfully trained and integrated. The web application can perform all the function required by the project.

Advantages

1) It is more accurate than human.
2) It is more efficient and fast in delivering results.
3) The result provided is unbiased.

Disadvantages

1) Might encounter some technical problem if not maintained properly.
2) Some factors like low illumination and image or video quality might lead to false positive.

Conclusion

I will conclude this project by saying that the potential of visual recognition is great as once the model is trained according to the require task it can repeat it as many times as required. It also Provide unbiased results which in certain conditions a human counterpart might not provide.

Future Scope

Visual recognition has a great future scope as it is already being used in self driving cars. As for this project, it also has a great future potential like training model so that it can recognize faces of employees and maybe even tools so that the are easy to locate if misplace.