Traffic Sign Detection & Classification Using Deep Learning And Model Comparison.

CSE499B.10

Usability And Manufacturability

Shadman Sakib	**1813190642**
Talukder Abdullah Al Talha	**1813193642**
Md . Sharukh Fardin	**1821463042**

Usability

In case of the usability of our project, at first we have to look into some facts which are:

User Interface (UI): A good user interface is one of the most necessary parts for a project. The more the UI is well organized, the more customers will be comfortable with the system and people of all ages can use that system easily.
In the case of our system, we are planning to keep our UI very simple and well organized as drivers of all ages with different technology related knowledge can use our system more comfortably.

Accuracy: As our project is about traffic sign detection and classification, accuracy is a major part of our system. The life of a large number of people will be dependent on the accuracy of our system. If we can not make our system accurate and precise, drivers may get wrong traffic direction and accidents may occur.
So, we will try to make sure that our system is accurate enough to give the correct direction all the time and in different weather and at low light also.

Speed: Speed is another major factor of our system. With good accuracy our system also needs a good speed so that it can quickly return the result to the customers.
As the job of our system is to detect and classify the traffic signs the main consumer of our project are the drivers. So as quick as possible to get the information about the traffic signs located in front of

them, they can make a decision to drive the car in that direction. Moreover, as we are also planning to develop our system for automated cars also, speed is really important.
As considering the sensitivity of the speed, we are planning to inform the drivers about the traffic signs within about 5 seconds before passing that particular sign in our system.

Manufacturability

To consider the factor manufacturability, we have to look into some factors like maintainability, cost, extensibility etc. of our project.

Maintainability: Maintainability is the first and the one of the most essential factors to think about during the manufacturability of the system. In the case of our system, we will try to ensure that our project is very easy to maintain as our system does not need too many hardware requirements such as wires. Also, our project will always be up to date so that customers do not need to update it manually.

Cost Efficiency: Every project and systems which have been implemented for the welfare of the society must have to be cost efficient so that all kinds of people with different economic conditions can reach and effort that system.
In our case, we will make sure that we will deploy our project at a minimum cost as we do not need so many hardware requirements.

Extensibility: Projects which are to help the mass people of the society should also be extensible.
For our project, we will try to deploy our system in large numbers in the initial stage so that we can cover a large number of customers. After some days, if the demand of our system will increase we will deploy more in numbers.