# Project Progress Report

# Traffic Sign Classifier

**Course:** COMP 4102
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# 1. Introduction (0.25-0.5 page)

The purpose of this report is to organize your project work and to obtain some insight about the progress that you made so far. By this time you should have a clear idea about the project and what you would like to achieve.

Please describe the project (e.g., objectives and expected outcome). You can include images to show the progress.

The project is an application that detects traffic signs and recognizes the type of signs that it detects.

We will achieve this by training Haar cascade classifiers for the many types of traffic signs that exist. This would involve writing getting metadata for images (image height, width, location of traffic sign in image) and training the cascade classifiers using this data.

After our cascade classifiers are generated, we can write code to apply these cascade classifiers to various images of traffic signs and testing their ability to detect and recognize traffic signs. If the accuracy is not good enough, we can generate more sample images and boost our sampling to try and create better cascade classifiers. We can also look for sets of negative images as well to include in our training.

The expected outcome is an application that can detect traffic signs in images and recognize them. If all goes well, we can get this to work in realtime (i.e. videos) as well.

## 2.      Tasks (0.5-1 page)

List the project tasks that must be completed in order to demonstrate your project. Write "done" in front of a completed task.

| Task | Effort/expected effort (in days) | Expected Completion day | Issues |
|---|---|---|---|
| (done) Gather training data | 1 | X | |
| Create utility for getting the metadata of the training images | 1 | Mar. 31 | |
| Create utility for automating image sample generation/boosting for haar cascades | 1 | Mar. 31 | Need to rollback opencv version to get the appropriate tools for this. |
| Train haar cascade classifiers for each sign type (generate xml) | 1 | April 9th | Need to rollback opencv version to get the appropriate tools for this. |
| Write code to use haar cascade classifiers for detection | 1 | April 9th | |
| Do testing | 1 | April 10th | |
| Further Optimizations | 1 | April 13th | |
| Extra: work with video | 1 | Unknown | |

## 3.      Show Stoppers (0.5 page)

In this section you will list and briefly discuss any show stoppers (if there are any) that may affect the project completion.

The research has been done and we have yet to find any serious issues yet. The biggest challenge we faced is figuring out working out how it all comes together.

As of now, there are really no show stoppers that we can see.