

1. Report from Virus Total API

- Inorder for us to get the report, we need either one of scan_id, sha1, resource, sha256, md5
- Extracted total number of engines used and the number of engines that gave the result positive.

Malware detection percentage using VirusTotal API has been found

```
'scan_id':  
'f7cb1a31a2aa318936dcead17c9ec7c2b37a4bfb0dcb8e8563987432601866d5-1543439833',  
'sha1': 'f8d953a75e89b6350dc45996a07658f955c67440',  
'resource': 'f7cb1a31a2aa318936dcead17c9ec7c2b37a4bfb0dcb8e8563987432601866d5',  
'response_code': 1, 'scan_date': '2018-11-28 21:17:13',  
'permalink': 'https://www.virustotal.com/file/  
f7cb1a31a2aa318936dcead17c9ec7c2b37a4bfb0dcb8e8563987432601866d5/analysis/1543439833/',  
'verbose_msg': 'Scan finished, information embedded',  
'total': 57,  
'positives': 15,  
'sha256': 'f7cb1a31a2aa318936dcead17c9ec7c2b37a4bfb0dcb8e8563987432601866d5',  
'md5': 'f82f0c062d746172f191b18e1e3d26a0'  
}
```

2. Cross-validation Score

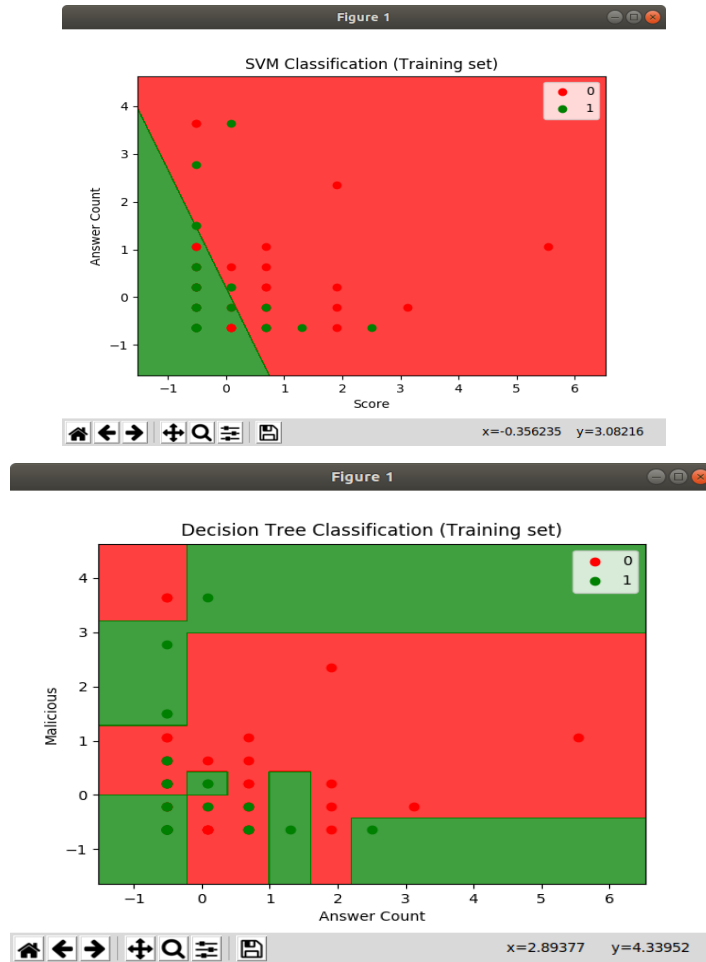
- 10 - Fold Validation Accuracy for Train Set using SVC.

```
SVC Cross Validation Accuracies:  
[0.55555556 0.55555556 0.44444444 0.625      0.5  
 0.625  
 0.75      0.5      0.375      0.875      ]
```

- 10 - Fold Validation Accuracy for Train Set using DTC.

```
Decsion Tree Cross Validation Accuracies:  
[0.55555556 0.88888889 0.33333333 0.625      0.5  
 0.75  
 0.625      0.5      0.5      0.625      ]
```

3. SVC(Support Vector Classifier) vs DTC(Decision Tree Classifier) over Train set.



4. SVC(Support Vector Classifier) vs DTC(Decision Tree Classifier) over Test set.



