**Project Proposal - GROUP 5**

**Automatic photo cropping, resizing and background removal and replacement**

**Introduction**

This is a project to automate the manual processing of photos of students taken to put on feels to overcome the difficulty of processing due to students with different heights such that the camera can be fixed still and no need of manual processing to adjust the face to the centre.   
This is done using automatic cropping, resizing.  
The background of the photo is to be removed and replaced with the respective color of the faculty (Pink for faculty of Engineering).

**Problem Description**

In the current way the student photos for the feels is taken, It is much difficult and time consuming for the photographers as well as photo editing people to do it as they have to manually adjust the camera for each student as they are with different heights and faces are not directly at the centre of the image taken. Also they have to manually process the images one by one to remove the background and to replace with pink color. So this project is aimed to automate this process where no manual adjusting of camera nor photo editing is required.

**Solution Description**

All the photos are taken using a camera placed still. Only thing that will be needed to bother for the photographer is that the image must contain the complete upper body picture of the student.

All the photos needed to be given as an input the program we are developing.

Also the needed output image size must be given as an input.

The the program identifies the position of the face. Then it crops or resize based on the conditions such that the face is positioned in a fixed place of the image(Decided at the beginning).

The background is then removed and replaced with a given color.

Then the image set is given as an output to the system.

See [Image1](https://docs.google.com/drawings/d/1mxAQ9QVUzySpb0bTThH2B0Czf1wwujGry0l-ikpMsHo/edit)

**Tasks breakdown**

|  |  |  |
| --- | --- | --- |
| name | Task | email |
| Hishan Indrajith  (E/14/009) | Face position Identification | [hishan.indrajith.95hia@gmail.com](mailto:hishan.indrajith.95hia@gmail.com) |
| Nadun Priyankara  (E/14/010) | Cropping and Resizing | [nadunp94@gmail.com](mailto:nadun.priyankara.adikari@gmail.com) |
| Jayamal Jayamaha (E/14/298) | Background Removal and Replacing | [jayamaljayamaha2@gmail.com](mailto:jayamaljayamaha2@gmail.com) |
| Hasitha Iroshana  (E/14/410) | GUI creation | [hidilshan70@gmail.com](mailto:hidilshan70@gmail.com) |