

Amrita School of Engineering
Department of Computer Science & Engineering
PROJECT PROPOSAL

TITLE OF PROJECT

SpotLight - Making conversations stay focused.

PROJECT MEMBERS

ENROLLMENT NO/EMAIL	PHOTO
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GUIDE

NAME : Vinitha Panicker J
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Signed by Guide (with date)

AREA OF PROJECT

Image Processing, AI

AIM OF THE PROJECT

Intelligently adjust the Field Of View (FOV) of an Integrated/ External Camera by taking advantage of the wide angle prospect and cropping into areas of interest based on Faces, Objects, and other factors, Enhancing the Area of Focus without moving the device physically.

SOFTWARE AND HARDWARE REQUIREMENTS OF PROJECT

1. Laptop with Webcam/ USB Camera
2. Linux/ MacOS/ Windows OS
3. Dedicated GPU

Synopsis of the Project

The idea behind is to use the wide-angle front camera with applied machine learning to keep the person/people in frame as they move, allowing a person to go hands-free or move about during a video call or when recording oneself in ease.

The operation beneath is to use a custom model built for adjusting crop factor for the sensor along with Face-recognition and Object tracking to allow focus on both people as well as objects for consistent and clear communication.

The hypothesis being that users can stay more confident and needn't worry about whether focus or positioning in the capture frame of the video to a higher degree without much setup and time needed.

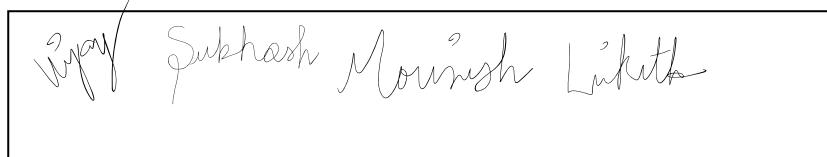
References for the Project (*Can be the references of papers if doing research, or any websites or materials that you refer*)

- Video Object detection with a convolutional regression tracker: [Link](#)
- Deep mutual learning for visual object tracking: [Link](#)
- DNN for low-cost Eye Tracking: [Link](#)

We hereby assure that the project that we will undertake will be done by us to its originality.

Signed by Project Members

Date: 25-07-2021



APPROVAL STATUS



Approved



Not approved

Suggestions for project approval / reformulating the Project:

Name and Signature of the Project Proposal Evaluator

Vinitha Panicker J

Date:
25-07-2021