Wrapper Design Document

**MULTIMEDIA IMAGE PROCESSING Using OpenCV**

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**Revision History**

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| Version (x.y) | Date of Revision | Description of Change | Reason for Change | Affected Sections | Approved By |
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**Approval History**

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**User Level Functions**

1.VITA\_cam():Enable camera and able to take picture. which uses following wrapper functions.

* videoCapture()
* imageRead()
* imageWrite()
* videorelease()
* cvtColor()
* resize()

2.VITA\_local():Able to browse image from local system.

3.VITA\_database():Able to browse image from database.

4.VITA\_faceDetect():compare the input image with the database images,if match found extract the detials and display the details along with the image.

Wrapper functions used in this API are

* CascadeClassifier()
* LBPHFaceRecognizer()
* imageRead()
* detectMultiScale()
* trainImages()
* saveImages()
* predictImageId()
* loadImages()
* WriteText()
* drawRectangle**()**
* imageShow()
* destroyAllWindows()

**Wrapper Functions**

**1.** videoCapture(arg)

where arg=0 for live camera

**2.** CascadeClassifier(File\_Name)

where file\_name is the name of xml file required from opencv

**3.** imageRead(Image\_Path,arg):

where Image\_Path is the path of the image filename

arg for 1= color

0= Grayscale

-1=Unchanged

**4.** imageShow(Window\_Name,Image Path):

where Window\_Name is a string to represent the name of window

Image\_Path is the path of the image filename

**5.** waitKey(Time\_Format\_in\_Milisecond):

where Time\_Format\_in\_Milisecond is the value to show the picture.

**6.** imageWrite(Image\_Name,Image\_Path):

where Image\_Name is the name to save the file.

Image\_Path is the path to save the image.

**7.** cvtColor(input\_image,flag)

where input\_image is the filename to change the color

Flag=Type Of Color Conversion

**8.** drawRectangle(img, pt1, pt2)

where img is filename

pt1,pt2 are the rectangle dimentions

**9.** LBPHFaceRecognizer()

no arguments

**10.**resize(face, (width, height))

where face is the name of image

width and height are dimensions to resize

11. DisplayText(img, text,org)

where img is the path of image

text is string to display on the image

org is the dimension of the image.

12.detectMultiScale(gray):

where gray is the Instance of the image in converted form

**13.**videorelease():

No argument

**14.** train\_images(faces, Ids):

where faces is the image instance

ids is the value to identify image instance

**15.** saveRecognizer(fileName):

where fileName is the name to save the file

**16.** predict\_image\_id(face):

where face is the image instance to recognise

returns integer number of the instance

**17.** loadRecognizer(FileName):

where FileName is the name of the file to load