Assignment_1_Kevin_C

May 29, 2020

1 Project Assignment

1.1 Kevin Coutinho Contact Sheet Assignment

THE OBJECTIVE OF THIS ASSIGNMENT IS TO VARY THE RGB VALUES AND CREATE A CONTACT SHEET, ALSO TO ADD A CAPTION TO EACH IMAGE, A DESCRIPTION OF THE INTENSITY VALUES

In [1]:
```
import PIL
from PIL import Image, ImageEnhance, ImageDraw, ImageFont

#empty image list
image_lst = []
#list of intensity values
intensity_lst=[0.1,0.5,0.9]

#sheet layer 0
for i in intensity_lst:
    image=Image.open("readonly/msi_recruitment.gif")
    image=image.convert('RGB')
    r, g, b = image.split()
    r = r.point(lambda x: x * i)
    out = Image.merge('RGB', (r, g, b))
    out = out.resize((int(out.width / 2), (int(out.height / 2))))
    rect = Image.new('RGB', (out.width, 40), color = (0, 0, 0))
    d = ImageDraw.Draw(rect)
    fnt = ImageFont.truetype('readonly/fanwood-webfont.ttf', 20)
    d.text((0, 0), 'channel 0 intensity {}'.format(i), font = fnt, fill = out.getpixel
    sheet = PIL.Image.new(out.mode, (out.width, out.height + rect.height))
    sheet.paste(rect, (0, out.height))
    sheet.paste(out, (0, 0))
    image_lst.append(sheet)

#sheet layer 1
for i in intensity_lst:
    image=Image.open("readonly/msi_recruitment.gif")
    image=image.convert('RGB')
```

```
            r, g, b = image.split()
            g = g.point(lambda x: x * i)
            out = Image.merge('RGB', (r, g, b))
            out = out.resize((int(out.width / 2), (int(out.height / 2))))
            rect = Image.new('RGB', (out.width, 40), color = (0, 0, 0))
            d = ImageDraw.Draw(rect)
            fnt = ImageFont.truetype('readonly/fanwood-webfont.ttf', 20)
            d.text((0, 0), 'channel 1 intensity {}'.format(i), font = fnt, fill = out.getpixel
            sheet = PIL.Image.new(out.mode, (out.width, out.height + rect.height))
            sheet.paste(rect, (0, out.height))
            sheet.paste(out, (0, 0))
            image_lst.append(sheet)

        #sheet layer 2
        for i in intensity_lst:
            image=Image.open("readonly/msi_recruitment.gif")
            image=image.convert('RGB')
            r, g, b = image.split()
            b = b.point(lambda x: x * i)
            out = Image.merge('RGB', (r, g, b))
            out = out.resize((int(out.width / 2), (int(out.height / 2))))
            rect = Image.new('RGB', (out.width, 40), color = (0, 0, 0))
            d = ImageDraw.Draw(rect)
            fnt = ImageFont.truetype('readonly/fanwood-webfont.ttf', 20)
            d.text((0, 0), 'channel 2 intensity {}'.format(i), font = fnt, fill = out.getpixel
            sheet = PIL.Image.new(out.mode, (out.width, out.height + rect.height))
            sheet.paste(rect, (0, out.height))
            sheet.paste(out, (0, 0))
            image_lst.append(sheet)

        first_image = image_lst[0]

        contact_sheet = PIL.Image.new(first_image.mode, (first_image.width * 3, first_image.hei
        x = 0
        y = 0

        for image in image_lst:
            contact_sheet.paste(image, (x, y))
            if x + first_image.width == contact_sheet.width:
                x = 0
                y = y + first_image.height
            else:
                x = x + first_image.width
```

In [2]:
```
display(contact_sheet)
```


Master of Science in Information
channel 0 intensity 0.1
Master of Science in Information
channel 0 intensity 0.5
Master of Science in Information
channel 0 intensity 0.9
Master of Science in Information
channel 1 intensity 0.1
Master of Science in Information
channel 1 intensity 0.5
Master of Science in Information
channel 1 intensity 0.9
Master of Science in Information
channel 2 intensity 0.1
Master of Science in Information
channel 2 intensity 0.5
Master of Science in Information
channel 2 intensity 0.9