MSBAPM Newsletter

February 2018 Edition

UCONN MSBAPM joins in celebrating Chinese New Year!

Images from the celebration at GBLC, Hartford

ANNOUNCEMENTS

VINAY SRIVASTAVA

We are pleased to welcome Vinay Srivastava from Class of Spring 2017 in our team. He is truly a "versatile" person – a singer, writer, musical instrument player, counselor and the list goes on. He has written myriads of articles ranging from serious topics like Philosophy to Sports (Cricket) to light-hearted humor.

RAMACHANDRA KARTHIK

Ramachandra Karthik Devulapalli is graduating soon and would move on to work in the industry. We thank him for his contributions over the last one year and wish him good luck in his future endeavors.

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7 QUESTIONS WITH FACULTY - PROF. LYNETTE WILSON

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7 Questions with Faculty: Lynette Wilson

Briefly give us an introduction about yourself, please.

As the oldest of 5 girls, I grew up right here in Connecticut, not too far from the Storrs campus, surrounded by tobacco farms and cow pastures. Except for a few years in my late teens and early twenties, when I lived in Hawaii and then Arizona, I have lived in Connecticut all my life. I have been married almost twenty years; we have no kids unless you count my four fur-babies (two cats and two dogs) or our nieces and nephews whom we spoil rotten. In our twenties and thirties, we lived in a townhouse in a moderate size city. However, five years ago, deciding we needed more peace and quiet, we bought a log cabin in the woods. It's a much more nature-driven life, very little external noise and light; we are surrounded by wildlife and heat almost exclusively with two large wood burning stoves. It's harder and yet easier than city life, and we love it.

How did you land your first teaching job?

Technically *this* is my first job as a "teacher" since completing my Masters in Nursing Education last December. (Maybe I shouldn't tell my students that just yet!) Have no fear, in my Master's program half of my courses focused on healthcare policy, ethics, technology, research, and evidenced-based practice. The other half of that degree focused on education; how people learn, teaching methods, how to develop a curriculum, classroom practices, test design/writing, and program accreditation. Throughout my coursework, we had teaching practicums and internships where I had the opportunity to develop course curriculums and teach.

However, as a nurse, I have been teaching for 22 years. After receiving my RN in 1995, I worked primarily in Oncology/Hematology (cancer/blood disorders). People tend to think of nurses as taking vital signs, changing dressings and administering medication. While those are aspects of nursing,

nurses are also constantly teaching. Nurses teach patients, their families, and communities about their medications, disease states, health promotion, illness prevention, diet, and environmental risks. I think this helped me prepare for true classroom teaching because, just like in healthcare, in the classroom, you never know what the next question will be, and you must go into each teaching experience willing to listen and learn as much as you tell and teach.

After 15 years of being a nurse in that traditional role, I took a job with a Bio-pharmaceutical company as a Nurse Educator. In this role, I taught about rare hematological disease externally to the patients and healthcare providers as well as internally to the sales team and my fellow nurses. That experience turned out to be invaluable in giving me insight to healthcare in the business world as well as presentation skills to large and small audiences.

So, while this is my first "official" teaching job, in some ways, I feel like I have always been a teacher.

What excited you to be part of the BAPM Faculty?

I am very excited to be part of the BAPM Faculty. As most of you know, my husband, John Wilson, was one of the first graduates of the MS BAPM program and now is a full-time instructor here. I have the unique vantage point of experiencing the BAPM program from the periphery almost since its inception. I have watched the program grow from a student body of 30 to its current size of close to 400. However, growth without passion or quality would not inspire me to want to teach here. The passion is evident in the staff and faculty who strive to create a world-class educational environment for the students while the students never fail to give it their very best and amaze me with their results. It is this passion that fuels the program. However, even passion is not enough. With your passion, you have to produce quality. Quality is this third element that truly inspires me to work in the UConn BAPM program. Quality is in the staff, quality of the education, and quality of the students. Passion, quality, and growth are difficult to find in a workplace. It is that combination that excites me to teach in the BAPM program.

What would you like to improve at BAPM?

As I have said, I have had the privilege to see the level of talent this program can produce. Also, as a longtime healthcare provider, I know the barriers, demands, and chasms facing healthcare today. I hope to inspire BAPM student to think about healthcare as an environment to which they can

bring their analytic talents. Selfishly, I truly feel that data analytics can drive the change needed and be a solution in healthcare; whether it be in a more accurate earlier diagnosis, predicting public health trends, preventative medicine, individualized (genetic based) medicine, cost, and better patient outcomes. I fully endorse the notion that healthcare's future is in the data.

What advice would you like to give to graduating BAPM students?

My overall advice in life is to slow down but don't hesitate. Slow down to appreciate the here and now. Don't hesitate to extend yourself and dive into something new.

To new students, I would offer, slow down and enjoy the experience of being a student. Much is expected of you but, try not to push through it so fast that you don't enjoy the journey. Don't hesitate to extend yourself and try something new. Extending yourself could be seeing more of this state or other states while here, it could be taking on a leadership role as a student, trying a class outside your comfort zone, or a new sport.

To students preparing to complete the program, I would offer, again slow down. Enjoy all the ups and downs of your new roles. Embrace your new opportunities. Be open to being the "new person," learn from the mentors as well as the persons in other roles within your new organizations. You will quickly find you are no longer the new person and you can then mentor and help the next new person along in their newness.

One true thing is we will never be right here again. So, slow down but don't hesitate.

What are your hobbies and interests apart from making BAPM great?

Recreation-wise I probably spend the most time playing with my two dogs. I run them, and we play catch in the back yard whenever the weather allows. I also love to work outside on our land, clearing trees, driving the tractor and landscaping. While inside, I typically spend most of my leisure time cooking. I love to bake and cook, finding cookbooks and experimenting with new recipes. I freeze a lot of things for quick dinners on school nights. I also love to garden, which ties back to the cooking. We have a small greenhouse, and I start many of my plants from seed and enjoy watching them grow all summer. I also preserve our garden output by freezing and canning, so we enjoy our bounty all winter. I wish I had more time to pursue my interest in needlecrafts, cross-stitch, and knitting and I hope to get back into sewing again. I also am an avid reader, mostly mysteries and have a hard time passing up a bookstore, which also feeds the cookbook habit. I think you should always have more interest than time to keep yourself busy.

Tell BAPM something surprising that we do not know.

Two things that are very juxtaposed with me is that I love to have the perfect manicure, but I love to do hard work on my property. We cut down trees and split and stack the wood for our two wood-burning stoves. I drive the tractor all over the property hauling in heavy loads of soil and debris. These things make it very hard to maintain the perfect manicure!

Agile, brings the idea to market

- Guanwei Tao

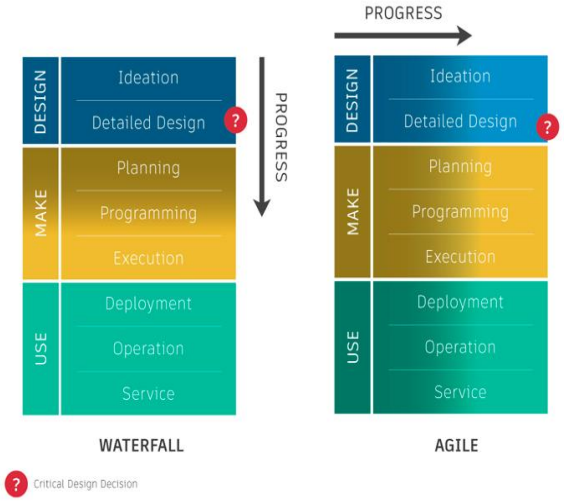
Agile is a magical stepping brick that brings lots of incredible job opportunities. The methodology is not only for software development industry anymore but also for projects with multiple decision makers.

Agile helped me to land my first internship after two months of school at UConn; it also helped me to land a full-time offer. I will be working as the global product manager in a leading global medical device company. It performs product development process through open innovation based on data analysis of overall customer demands. One of the reasons that I secured this

opportunity was because of Agile. It will be the key tool I am going to use every day to develop and launch products and to communicate with other stakeholders' teams.

In general, "Agile" is a trending project management methodology originally used for product development in the software industry to build software incrementally from the start of the project. Instead of delivering all results at once near the end, Agile allows early delivering business value with less bureaucracy.

In Agile's process, customer satisfaction can be continuously delivered in a timely manner because the project team is working collaboratively to emphasize interactions, face to face communication, the regular adaptation based on changed circumstances. Therefore, Agile is not limited to software product development, but also for any projects that refer to create MVP and highlights value proposition.



1Waterfall Vs. Agile

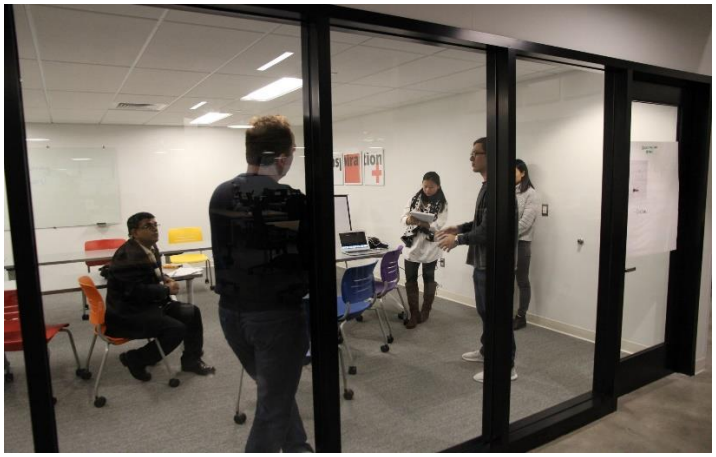
(Reference:https://www.autodesk.com/industry/manufacturing/resources/mechanical-engineer/agile-product-development)

I was one of the nine students in the first Agile class at UConn School of Business in 2016. Professor Kelvin Wilkins, assigned us to the self-organized team on scrum to develop an MVP. Scrum works from defining **product backlogs** with prioritizing product features, and broken features into **sprint backlog.** Meanwhile, during the daily meeting, the team worked on **sprint review** for feedbacks and approval was given. We initiated an idea of breast prosthetic medical product for breast cancer survivors. The Agile approach lead us with a clear roadmap to plan user stories for an implementable product prototype, from defining the product features to choosing materials, the constant feedback from the team and other external stakeholders drove the increase of the final deliverables. The entire team work experience was extremely fun because we were a group of motivated individuals, and we worked together for the same goal. Each one of us had the ability and authority to make decisions based on the readily adapt to changing demands.

2"Pizza Game" to learn Scrum for sprint backlog (in class practice)

Agile helped me placed my first internship to work on a project developing Rheumatology Arthritis therapeutic. During the interview process, the hiring manager was excited to learn how Agile can effectively achieve the highest customer satisfaction by involving customers as decision makers during the product design process and how constantly feedback loop saves overall project cost as well as increases productivity to meet the best outcome. Agile was involved to engage collaboration among R&D, commercial, and clinical to best work together for a business plan that brings the idea to a proof of concept stage. After the summer, the project team received public grants to pursue the next stage; the Agile concept was still in progress.

Everything that relates to product development can be applied to Agile.



3Feedback session in the process

On Feb,9th, the most recent-DIGITAL HEALTH HACKATHON Upward Hartford, the Agile concept was fully implied to manage the entire event. The goal of the 48-hour event was to start with an idea on Friday night and leave Sunday evening with a startup company. Three sessions of feedback loops from industry mentors and investors to iterate the idea of technology-centric solutions to best meet the current unsolved problems. Our team initiated an idea to develop a sensor-based machine learning Diabetic insole to prevent the diabetic amputee potential, a device called DiaSens. Based on each feedback session from mentors on product disruption, vision, and market benefit, the team iterated to progress the project to adopt changes for some requirements to lower risks associated with development. Through the iterative planning process, the business value was developed and presented. On Sunday evening, the final pitch was delivered. We are the only team to develop a medical device product.

Because of the constant feedback from experienced and mentors and advisers along the journey, our idea was reinforced to have strong market viability. After the event, we decided to contentiously purse this idea for further development. The ultimate goal for our team is to bring valuable medical products to save lives. We believe, with Agile along the way, the goal will not be far!

Image Processing and Neural Networks Intuition

- Jobil Louis

In this series, I will talk about training a simple neural network on image data. To give a brief overview, neural networks is a kind of supervised learning. By this I mean, the model needs to train on historical data to understand the relationship between input variables and target variables. Once trained, the model can be used to predict target variable on new input data. In the previous posts, we have written about linear, lasso and ridge regression.

All those methods come under supervised learning. But what is special about neural networks is, it works well for image, audio, video and language datasets. A multilayer neural network and its variations are commonly called deep learning.

In this blog, I will focus on handling and processing the image data. In the next blog, I will show how to train the model. I will use python for implementation as python as many useful functions for image

processing. If you are new to python, I recommend you to quickly take a numpy (till array manipulation) and matplotlib tutorial.

Main contents of this article:

a) Exploring image dataset: Reading images, printing image arrays and actual images, decomposing images into different color channels

b) Cropping and Resizing images: Cropping rectangle images to a square, resizing high-resolution images to a lower resolution for easier processing, creating grayscale images from color images and standardizing image data.

c) Color-mapping and Interpolation: Converting no color channel images to color images using different themes. Interpolating after resizing or reducing the resolution of images to for retaining quality and information.

d) Montage Creation and Preparing image data for modeling

Okay! Let's get started. First, let's get some data set. This data is shared in the course on kadanze about Creative Applications of Deep learning by Parag Mittal. This data contains pictures of celebrities. Original source can be found here along with some description http://mmlab.ie.cuhk.edu.hk/projects/CelebA.html.

In the original dataset, there are around 200,000 pictures. For the purpose of this blog, we will use 100 images. The following code will download 100 images.

```
# Load the os library
import os

# Load the request module
import urllib.request

if not os.path.exists('img_align_celeba'):

    # Create a directory
    os.mkdir('img_align_celeba')

    # Now perform the following 100 times:
    for img_i in range(1, 101):

        # create a string using the current loop counter
        f = '000%03d.jpg' % img_i

        # and get the URL with that string appended the end
        URL = 'https://s3.amazonaws.com/cadl/celeb-align/' + f

        # We'll print this out to the console so we can see how far we've gone
        print(url, end='\r')
```

```
    # And now download the url to a location inside our new directory
    urllib.request.urlretrieve(url, os.path.join('img_align_celeba', f))
else:
   print('Celeb Net dataset already downloaded')
```

If the dataset is not downloaded, the above code will download it. Let's read the downloaded images into a variable.

```
files = [os.path.join('img_align_celeba', file_i)
 for file_i in os.listdir('img_align_celeba')
 if '.jpg' in file_i]
```

Let's add a target column. Here we will try to identify whether a picture shows a male celebrity or female celebrity. Value 1 denotes 'Female celebrity' and 0 denotes 'male celebrity'.

```
y=np.array([1,1,0,1,1,1,0,0,1,1,1,0,0,1,0,0,1,1,1,0,0,1,0
,1,0,1,1,1,1,0,1,0,0,1,1,0,0,0,1,1,0,1,1,1,1,1,1,0,0,0,0,0,
0,1,0,0,1,1,1,0,0,1,1,0,0,1,0,0,0,0,1,0,1,1,1,0,1,1,0,0,0,
0,1,1,1,1,1,1,1,0,0,1,1,1,1,1,1,1,1,1])
y=y.reshape(1,y.shape[0])
classes=np.array(['Male', 'Female'])
y_train=y[:,:80]
y_test=y[:,80:]
```

Now let's take a closer look at our data set. For this, we will use the matplotlib library for plotting. We can also use it to view the images in our data.

```
import matplotlib.pyplot as plt
%matplotlib inline
```

Exploring image dataset

In this section, we will try to understand our image data better. Let's plot an image from the data set(in this case the first image)

```
plt.imread(files[0])
```

Output:

```
array([[[253, 231, 194],
        [253, 231, 194],
        [253, 231, 194],
        ...,
        [247, 226, 225],
        [254, 238, 222],
        [254, 238, 222]],

       [[253, 231, 194],
        [253, 231, 194],
        [253, 231, 194],
        ...,
        [249, 228, 225],
        [254, 238, 222],
        [254, 238, 222]],

       [[253, 231, 194],
        [253, 231, 194],
        [253, 231, 194],
        ...,
```

```
       [250, 231, 227],
       [255, 239, 223],
       [255, 239, 223]],

      ...,
      [[140,  74,  26],
       [116,  48,   1],
       [146,  78,  33],
       ...,
       [122,  55,  28],
       [122,  56,  30],
       [122,  56,  30]],

      [[130,  62,  15],
       [138,  70,  23],
       [166,  98,  53],
       ...,
       [118,  49,  20],
       [118,  51,  24],
       [118,  51,  24]],

      [[168, 100,  53],
       [204, 136,  89],
       [245, 177, 132],
       ...,
       [118,  49,  20],
       [120,  50,  24],
       [120,  50,  24]]], dtype=uint8)
```

It prints some numbers. Here each tuple (the innermost array) represents a pixel. As you can see, it has 3 values, one corresponding to each color channel, RGB (Red, Green Blue). To view the data as image, we have to use 'imshow' function

```
img = plt.imread(files[0])
plt.imshow(img)
```

Output:

Let's see the shape(dimensions) of the image

```
img.shape
```

Output:

```
(218, 178, 3)
```

This means height of the image is 218 pixels,width 178 pixels and each pixel has 3 color channels(RGB). We can view the image using each of the color channels.

```
plt.figure()
plt.imshow(img[:, :, 0])
plt.figure()
plt.imshow(img[:, :, 1])
plt.figure()
plt.imshow(img[:, :, 2])
```

Output:

Cropping and resizing images

For many of the deep learning and image processing applications, we will need to crop the image to a square and resize it for faster processing. The following function will crop any rectangle image (height != width) to a square image

```
def imcrop_tosquare(img):
    if img.shape[0] > img.shape[1]:
        extra = (img.shape[0] - img.shape[1]) // 2
        crop = img[extra:-extra, :]
    elif img.shape[1] > img.shape[0]:
        extra = (img.shape[1] - img.shape[0]) // 2
        crop = img[:, extra:-extra]
    else:
        crop = img
    return crop
```

Now we will resize the image to 64 by 64 pixels(height=64,width=64). For resizing, we can use the imresize function from scipy.

```
from scipy.misc import imresize
square = imcrop_tosquare(img)
rsz = imresize(square, (64, 64))
plt.imshow(rsz)
print(rsz.shape)
```

Output:

```
(64, 64,3)
```

As we can see from the shape of the image, it has been resized to (64,64,3). If we take the mean of each color channels(RGB), we will get a grayscale image.

```
mean_img = np.mean(rsz, axis=2)
print(mean_img.shape)
plt.imshow(mean_img, cmap='gray')
```

Output:

```
(64, 64)
```

Color mapping and interpolating images

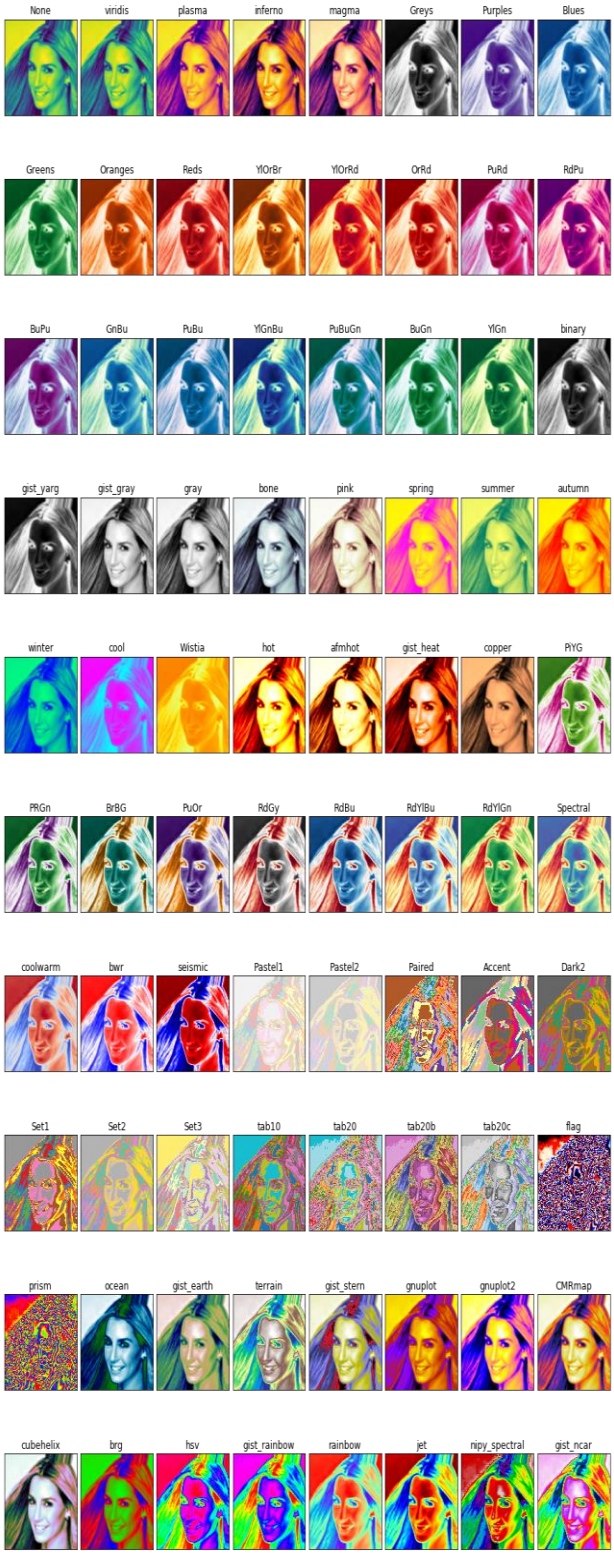
When there is no color channel for an image, you can use different available color maps provided by matplotlib. Following code iterates through different color maps for the above image (with no color channel) and plots it. For your purposes, you can choose the best one if you come across such images.

It is also an easy way to convert grayscale images to color.

```
mean_img = np.mean(rsz, axis=2)
methods = [None,'viridis', 'plasma', 'inferno',
'magma','Greys', 'Purples', 'Blues', 'Greens', 'Oranges',
'Reds',
 'YlOrBr', 'YlOrRd', 'OrRd', 'PuRd', 'RdPu',
'BuPu','GnBu', 'PuBu', 'YlGnBu', 'PuBuGn', 'BuGn',
'YlGn',
 'binary', 'gist_yarg', 'gist_gray', 'gray', 'bone', 'pink',
'spring', 'summer', 'autumn', 'winter', 'cool', 'Wistia',
 'hot', 'afmhot', 'gist_heat', 'copper','PiYG', 'PRGn',
'BrBG', 'PuOr', 'RdGy', 'RdBu','RdYlBu', 'RdYlGn',
 'Spectral', 'coolwarm', 'bwr', 'seismic','Pastel1',
'Pastel2', 'Paired', 'Accent','Dark2', 'Set1', 'Set2', 'Set3',
 'tab10', 'tab20', 'tab20b', 'tab20c','flag', 'prism', 'ocean',
'gist_earth', 'terrain', 'gist_stern','gnuplot',
 'gnuplot2', 'CMRmap', 'cubehelix', 'brg',
'hsv','gist_rainbow', 'rainbow', 'jet', 'nipy_spectral',
'gist_ncar']

np.random.seed(19680801)
fig, axes = plt.subplots(10, 8, figsize=(16, 32),
 subplot_kw={'xticks': [], 'yticks': []})

fig.subplots_adjust(hspace=0.3, wspace=0.05)

for ax, interp_method in zip(axes.flat, methods):
 ax.imshow(mean_img,
interpolation='sinc',cmap=interp_method)
 ax.set_title(interp_method)
plt.show()
```

Output:

<on next page>



Now let's crop all the rectangle images as square and resize all the images in the dataset to size 64, 64, 3.

```
imgs = []
for file_i in files:
    img = plt.imread(file_i)
    square = imcrop_tosquare(img)
    rsz = imresize(square, (64, 64))
    imgs.append(rsz)
print(len(imgs))
```

Output:

```
100
```

Let's combine all the images into a variable

```
data = np.array(imgs)
```

If you are familiar with machine learning, you will know the about data standardization. It means generally bringing down the range of an input variable. Same can be done with image data as well. However, for images, there is an easy way to standardize. We can simply divide each of the values by 255, as each pixel can have values from 0-255. This will change the scale from 0-255 to 0-1. This will make sure while taking exponents in logistic regression, we won't overflow the system.

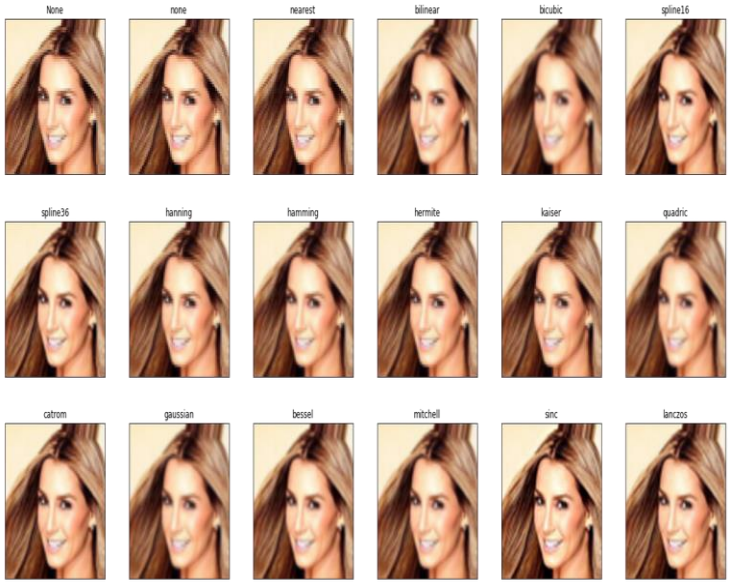
```
data=data/255
plt.imshow(data[0])
```

Output:

When we reduce the resolution, we lose some information. We can use different kinds of interpolation to overcome this. The following code shows the effect of different kinds of interpolation. While plotting images after resizing, you can choose any interpolation you like.

```
data.shape
methods = [None, 'none', 'nearest', 'bilinear', 'bicubic', 'spline16',
 'spline36', 'hanning', 'hamming', 'hermite', 'kaiser', 'quadric',
 'catrom', 'gaussian', 'bessel', 'mitchell', 'sinc', 'lanczos']

np.random.seed(19680801)

fig, axes = plt.subplots(3, 6, figsize=(24, 12),
 subplot_kw={'xticks': [], 'yticks': []})

fig.subplots_adjust(hspace=0.3, wspace=0.05)

for ax, interp_method in zip(axes.flat, methods):
 ax.imshow(data[0], interpolation=interp_method, cmap=None)
 ax.set_title(interp_method)

plt.show()
```

Output:



Let's see the shape(dimensions) of the variable data.

```
data.shape
```

Output:

```
(100, 64, 64, 3)
```

Shape of the data is 100,64,64,3. This means there are 100 images of size(64,64,3)

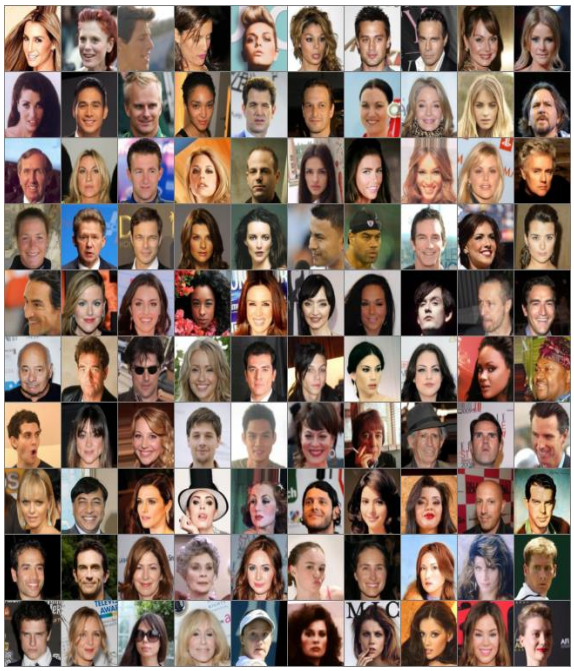
Montage creation

Till now we have been inspecting one image at a time. To view all images, we can use the following function to create a montage of all the images

```
def montage(images, saveto='montage.png'):
    """Draw all images as a montage separated by 1-pixel borders.
```

```
    Also saves the file to the destination specified by
`saveto`.
    Parameters
    ----------
    images : numpy.ndarray
        Input array to create a montage of.  The array
should be:
        batch x height x width x channels.
    saveto : str
        Location to save the resulting montage image.
    Returns
    -------
    m : numpy.ndarray
        Montage image.
    """
    if isinstance(images, list):
        images = np.array(images)
    img_h = images.shape[1]
    img_w = images.shape[2]
    n_plots = int(np.ceil(np.sqrt(images.shape[0])))
    if len(images.shape) == 4 and images.shape[3] == 3:
        m = np.ones(
            (images.shape[1] * n_plots + n_plots + 1,
             images.shape[2] * n_plots + n_plots + 1, 3)) *
0.5
    else:
        m = np.ones(
            (images.shape[1] * n_plots + n_plots + 1,
             images.shape[2] * n_plots + n_plots + 1)) * 0.5
    for i in range(n_plots):
        for j in range(n_plots):
            this_filter = i * n_plots + j
            if this_filter < images.shape[0]:
                this_img = images[this_filter]
                m[1 + i + i * img_h:1 + i + (i + 1) * img_h,
                  1 + j + j * img_w:1 + j + (j + 1) * img_w] =
this_img
    plt.imsave(arr=m, fname=saveto)
    return m
plt.figure(figsize=(10, 10))
plt.imshow(montage(imgs,saveto='montage.png').astyp
e(np.uint8))
```

Output:



Data Preparation for modeling

Let's split the data into train and test. Train data will be used to train the model. Then we will predict on test data to check the accuracy of the trained model.

```
train_x_orig=data[:80,:,:,:]
test_x_orig=data[80:,:,:,:]
```

Unlike regression model, logistic regression is used to predict a binomial variable, that is, a variable which takes only two values. This suits perfectly for us as we are trying to predict from the images whether it is a male or female celebrity.

```
m_train = train_x_orig.shape[0]
m_test = y_test.shape[1]
num_px = train_x_orig.shape[1]



print ("Number of training examples: m_train = " + str(m_train))
print ("Number of testing examples: m_test = " + str(m_test))
print ("Height/Width of each image: num_px = " + str(num_px))
print ("Each image is of size: (" + str(num_px) + ", " + str(num_px) + ", 3)")
print ("train_x shape: " + str(train_x_orig.shape))
print ("y_train shape: " + str(y_train.shape))
print ("test_x shape: " + str(test_x_orig.shape))
print ("y_test shape: " + str(y_test.shape))
```

Output:

```
Number of training examples: m_train = 80
Number of testing examples: m_test = 20
Height/Width of each image: num_px = 64
Each image is of size: (64, 64, 3)
train_x shape: (80, 64, 64, 3)
y_train shape: (1, 80)
test_x shape: (20, 64, 64, 3)
y_test shape: (1, 20)
```

For the purpose of training, we have to reshape our data or flatten our data. After flattening, the shape of our data should become (height * width * 3, number of examples). After flattening, every column will represent an image.

```
train_x = train_x_orig.reshape(train_x_orig.shape[0],-1).T
test_x = test_x_orig.reshape(test_x_orig.shape[0],-1).T
print ("train_x flatten shape: " + str(train_x.shape))
print ("test_x flatten shape: " + str(test_x.shape))
```

Output:

```
train_x flatten shape: (12288, 80)
test_x flatten shape: (12288, 20)
```

Now we have our data set ready. In the next part, I will talk about how to train the model using simple logistic regression using gradient descent. Meanwhile, If you want to know more about gradient descent check it out here.

References:

‘Creative Applications of Deep Learning with Tensorflow’ on Kadenze by Parag Mital ‘Neural Networks and Deep Learning’ on Coursera by Andrew Ng

The Three Mountains

- Vinay Srivastava

There were three mountains which were adjacent to each other. Alongside, there was a deep valley because of which the humans or animals could not travel across the mountains.

One day some Gods passed by the area and told the three mountains that the name of the entire region was going to be announced. However, Gods could name the region after one of the mountains only. They offered the three mountains to express their one wish and promised to fulfill them. They were in a good mood and were ready to bestow any boon.

The first mountain asked, "May I rise so high that I become visible from a long distance." Gods said, "Granted!". The first mountain rose above the clouds and was contented.

The second mountain asked, "May I have so much of flora and fauna that everybody is attracted towards me." Gods said, "Granted!". The second mountain turned lush green with dense flora and fauna.

The third mountain was deep in thought while the other two were busy asking for everything. When Gods reminded him about his chance to ask for anything, the third mountain said, "Utilize my height and fill this valley so that the entire valley becomes fertile and accessible to humans and animals."

Gods said nonchalantly, "Granted!". At the next instant, the entire valley became fertile land.

They left and promised to return after a year.

When they returned, they found that the first mountain which had risen above the clouds, was visible from a long distance but nobody went there. It had to suffer from hostile winds, rough weather, and harsh sunlight.

The second mountain was so densely covered with the vegetation that people feared going there. It became the cause of terror too due to wild animals.

The third mountain which had been leveled alongside the pre-existing valley was populated with people. The agriculture was flourishing, and everybody gained because of that.

The Gods named the entire region after the third mountain.

This story has a close connection with our lives.

When we target quick rise in our career like a coconut tree, we alienate ourselves from our surroundings. We gain in the short run but lose in the long run.

When we target disproportionate material gains for ourselves, we end up having more pseudo-friends than the real ones.

However, the only people who are remembered for long time and have true friends are those who live to serve. We can safely say that this holds true for today's corporate world as well.

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