

Import some Libraries. Right now, we're using Scikit_learn for scaling data. Furthermore, we import sklearn

```
In [2]: import numpy as np
import seaborn as sb
import scipy

import pandas as pd
from pandas import Series, DataFrame

import matplotlib.pyplot as plt
from pylab import rcParams

import sklearn
from sklearn import preprocessing
from sklearn.preprocessing import scale
```

Configuring canvas and read csv document from local file

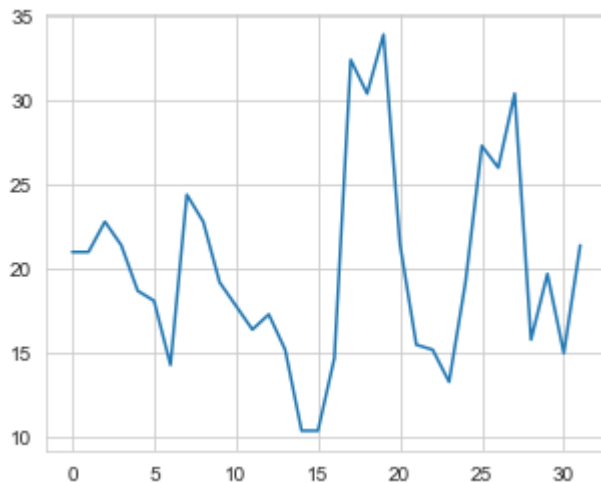
```
In [3]: %matplotlib inline
rcParams['figure.figsize'] = 5,4
sb.set_style('whitegrid')
```

```
In [4]: address = 'C:/Users/muham/mtcars.csv'
cars = pd.read_csv(address)
cars.columns = ['car_names', 'mpg', 'cyl', 'disp', 'hp', 'drat', 'wt', 'qsec', 'v'
```

Line Plot down below is for mpg without scaling

```
In [5]: mpg = cars['mpg']  
plt.plot(mpg)
```

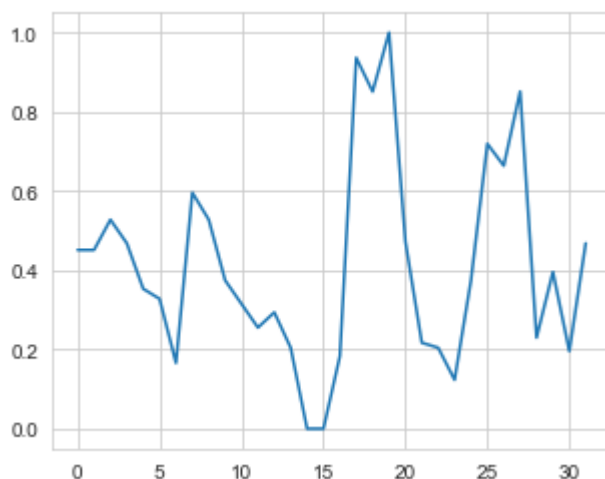
```
Out[5]: [<matplotlib.lines.Line2D at 0xa12c290>]
```



Line Plot down below is for mpg with Normalization method in scaling data. The key is using MinMaxScaler and fit_transform

```
In [9]: mpg_matrix = mpg.values.reshape(-1,1)  
scaled = preprocessing.MinMaxScaler()  
scaled_mpg = scaled.fit_transform(mpg_matrix)  
plt.plot(scaled_mpg)
```

```
Out[9]: [<matplotlib.lines.Line2D at 0xa1b5cb0>]
```



Line Plot down below is for mpg using Standardization Method. The key is using scale() function

```
In [10]: standardized_mpg = scale(mpg)
plt.plot(standardized_mpg)
```

```
Out[10]: [<matplotlib.lines.Line2D at 0xa1f5e70>]
```

