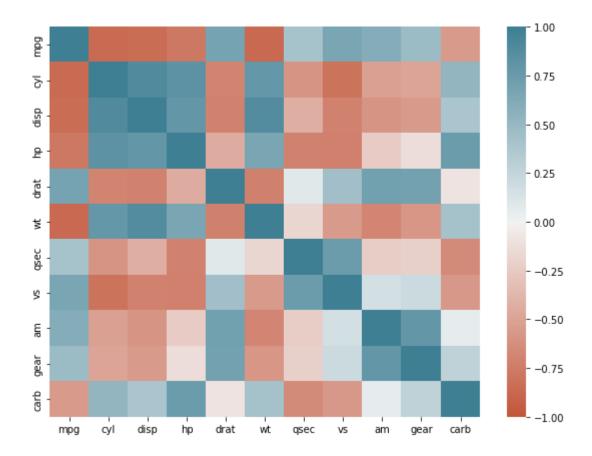
```
In [7]: %matplotlib inline
  import pandas as pd
  import numpy as np
  import seaborn as sns
  import matplotlib.pylab as plt
```

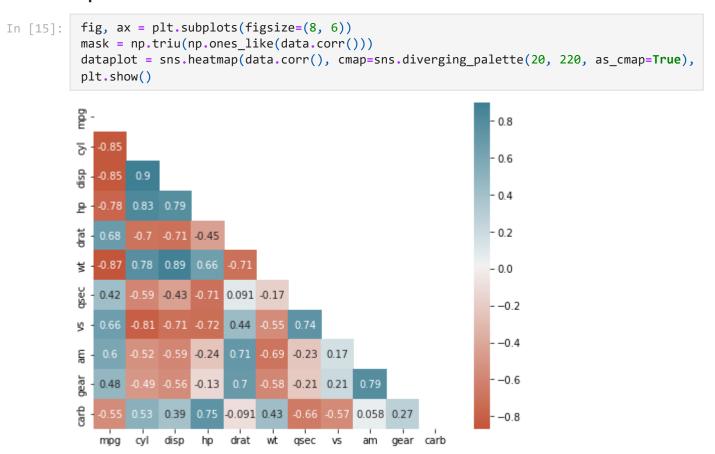
Correlation matrix for mtcars data

```
Out[8]:
                                 disp
                                                drat
                   mpg
                            cyl
                                           hp
                                                         wt
                                                              qsec
                                                                        vs
                                                                               am
                                                                                     gear
                                                                                            carb
                   1.00
                         -0.85
                                 -0.85
                                        -0.78
                                                0.68
                                                       -0.87
                                                               0.42
                                                                      0.66
                                                                              0.60
                                                                                     0.48
                                                                                            -0.55
           mpg
             cyl
                  -0.85
                           1.00
                                  0.90
                                         0.83
                                               -0.70
                                                        0.78
                                                              -0.59
                                                                      -0.81
                                                                             -0.52
                                                                                    -0.49
                                                                                             0.53
                  -0.85
                           0.90
                                  1.00
                                         0.79
                                               -0.71
                                                              -0.43
                                                                             -0.59
                                                                                    -0.56
                                                                                             0.39
            disp
                                                        0.89
                                                                      -0.71
                  -0.78
                          0.83
                                  0.79
                                         1.00
                                               -0.45
                                                              -0.71
                                                                                    -0.13
                                                                                             0.75
             hp
                                                        0.66
                                                                      -0.72
                                                                             -0.24
            drat
                   0.68
                          -0.70
                                -0.71
                                        -0.45
                                                 1.00
                                                       -0.71
                                                               0.09
                                                                      0.44
                                                                              0.71
                                                                                     0.70
                                                                                            -0.09
                  -0.87
                          0.78
                                  0.89
                                         0.66
                                               -0.71
                                                        1.00
                                                              -0.17
                                                                      -0.55
                                                                             -0.69
                                                                                    -0.58
                                                                                             0.43
             wt
                   0.42
                         -0.59
                                 -0.43
                                        -0.71
                                                0.09
                                                       -0.17
                                                               1.00
                                                                      0.74
                                                                             -0.23
                                                                                    -0.21
                                                                                            -0.66
           qsec
              vs
                   0.66
                         -0.81
                                -0.71
                                        -0.72
                                                0.44
                                                       -0.55
                                                               0.74
                                                                       1.00
                                                                              0.17
                                                                                     0.21
                                                                                            -0.57
                   0.60
                         -0.52
                                -0.59
                                        -0.24
                                                 0.71
                                                       -0.69
                                                              -0.23
                                                                      0.17
                                                                              1.00
                                                                                     0.79
                                                                                            0.06
             am
           gear
                   0.48
                         -0.49
                                 -0.56
                                        -0.13
                                                 0.70
                                                       -0.58
                                                              -0.21
                                                                      0.21
                                                                              0.79
                                                                                     1.00
                                                                                             0.27
                          0.53
                                  0.39
                                         0.75 -0.09
                                                        0.43 -0.66 -0.57
                                                                                     0.27
                                                                                             1.00
                  -0.55
                                                                              0.06
```

This is correlation heatmap based on correlation matrix. The size of ellipse tells the positive and negative correlations



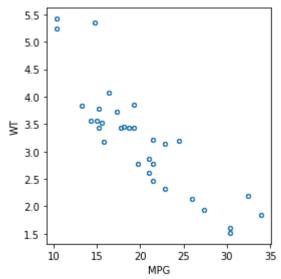
Below is just the visually different version in case anyone just wants to see one part of the correlation since other half is just the repeatation



Various versions of scatter Plot for mtcars data

```
In [26]: ax = data.plot.scatter(x='mpg', y='wt', figsize=(4, 4), marker='$\u25EF$')
ax.set_xlabel('MPG')
ax.set_ylabel('WT')

plt.tight_layout()
plt.show()
```



```
In [25]: rng = np.random.RandomState(0)
    sizes = 1000 * rng.rand(32)
    ax = data.plot.scatter(x='mpg', y='wt',s=sizes, figsize=(4, 4), marker='*')
    ax.set_xlabel('MPG')
    ax.set_ylabel('WT')

plt.tight_layout()
    plt.show()
```

