The data set (and description) can be downloaded here:
http://archive.ics.uci.edu/ml/machine-learning-databases/image/

Description:

```
1. Title: Image Segmentation data

2. Source Information
   -- Creators: Vision Group, University of Massachusetts
   -- Donor: Vision Group (Carla Brodley, brodley@cs.umass.edu)
   -- Date: November, 1990

3. Past Usage: None yet published

4. Relevant Information:

   The instances were drawn randomly from a database of 7 outdoor
   images.  The images were handsegmented to create a classification
   for every pixel.

   Each instance is a 3x3 region.

5. Number of Instances: Training data: 210  Test data: 2100

6. Number of Attributes: 19 continuous attributes
```

7. Attribute Information:
    1. region-centroid-col: the column of the center pixel of the region.
    2. region-centroid-row: the row of the center pixel of the region.
    3. region-pixel-count: the number of pixels in a region = 9.
    4. short-line-density-5: the results of a line extractoin algorithm that
       counts how many lines of length 5 (any orientation) with
       low contrast, less than or equal to 5, go through the region.
    5. short-line-density-2: same as short-line-density-5 but counts lines
       of high contrast, greater than 5.
    6. vedge-mean: measure the contrast of horizontally
       adjacent pixels in the region. There are 6, the mean and
       standard deviation are given. This attribute is used as
      a vertical edge detector.
    7. vegde-sd: (see 6)
    8. hedge-mean: measures the contrast of vertically adjacent
       pixels. Used for horizontal line detection.
    9. hedge-sd: (see 8).
    10. intensity-mean: the average over the region of (R + G + B)/3
    11. rawred-mean: the average over the region of the R value.
    12. rawblue-mean: the average over the region of the B value.
    13. rawgreen-mean: the average over the region of the G value.
    14. exred-mean: measure the excess red: (2R - (G + B))
    15. exblue-mean: measure the excess blue: (2B - (G + R))
    16. exgreen-mean: measure the excess green: (2G - (R + B))
    17. value-mean: 3-d nonlinear transformation
       of RGB. (Algorithm can be found in Foley and VanDam, Fundamentals
       of Interactive Computer Graphics)
    18. saturatoin-mean: (see 17)
    19. hue-mean: (see 17)

8. Missing Attribute Values: None

9. Class Distribution:
   Classes: brickface, sky, foliage, cement, window, path, grass.

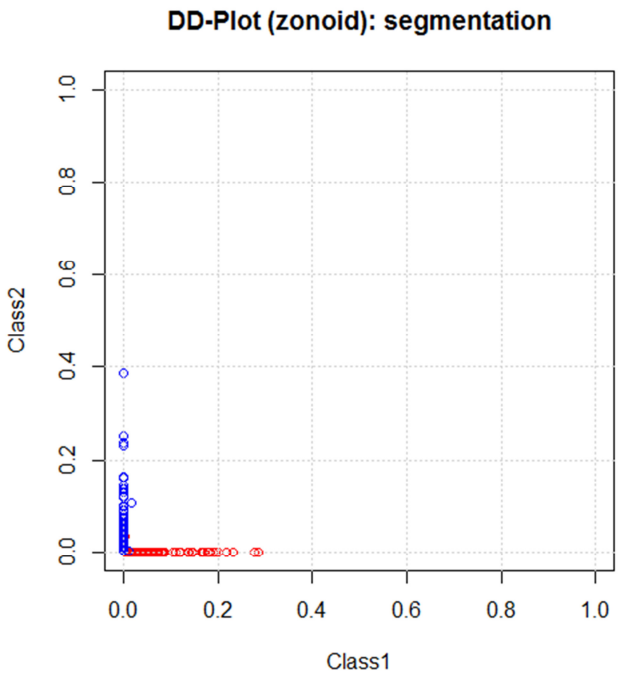
   30 instances per class for training data.
   300 instances per class for test data.

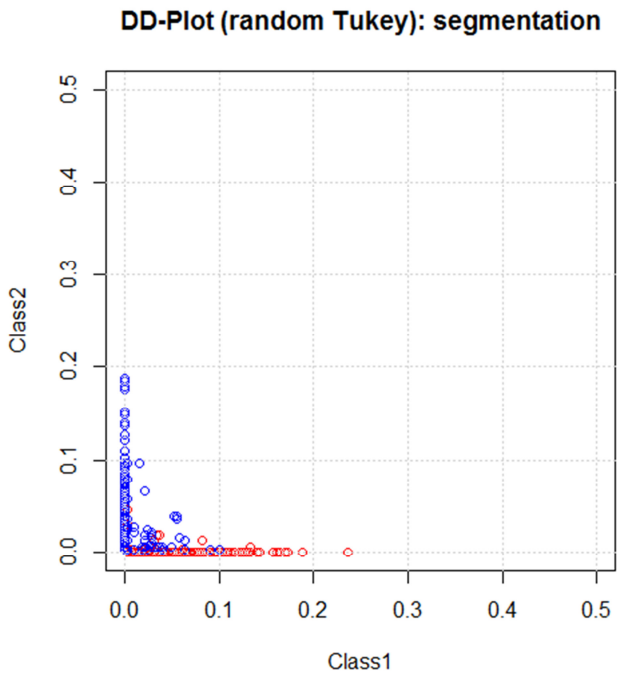
Citation Request:
Please refer to the repository http://archive.ics.uci.edu/ml (see citation policy).
See also Frank, A. & Asuncion, A. (2010). UCI Machine Learning Repository [http://archive.ics.uci.edu/ml]. Irvine,
CA: University of California, School of Information and Computer Science.

Descriptive statistics:

```
Dataset= segmentation : n= 660 , d= 10

Class1: n= 330

Covariance matrix:
           [,1]      [,2]    [,3]    [,4]    [,5]     [,6]    [,7]      [,8]    [,9]   [,10]
 [1,] 4618.9952  223.3175 -0.3150 -0.0296 14.3268 246.3601 45.4397 -240.4204 -1.0481  1.9278
 [2,]  223.3175 1428.3118  0.0574 -0.0817 12.3275  40.9520  6.2346 -305.3255  1.1930 -0.1304
 [3,]   -0.3150    0.0574  0.0021  0.0001 -0.0192  -0.0741 -0.0132    0.0228  0.0000  0.0002
 [4,]   -0.0296   -0.0817  0.0001  0.0005  0.0010  -0.0047  0.0064    0.0017  0.0000  0.0000
 [5,]   14.3268   12.3275 -0.0192  0.0010 12.6602  48.3600 -0.5104   -6.2857 -0.0040 -0.0211
 [6,]  246.3601   40.9520 -0.0741 -0.0047 48.3600 911.8912 10.7377   -3.0201 -0.0896  0.0114
 [7,]   45.4397    6.2346 -0.0132  0.0064 -0.5104  10.7377 12.3857   -3.3884 -0.0462  0.0558
 [8,] -240.4204 -305.3255  0.0228  0.0017 -6.2857  -3.0201 -3.3884  240.9849 -0.6699 -0.1435
 [9,]   -1.0481    1.1930  0.0000  0.0000 -0.0040  -0.0896 -0.0462   -0.6699  0.0062 -0.0055
[10,]    1.9278   -0.1304  0.0002  0.0000 -0.0211   0.0114  0.0558   -0.1435 -0.0055  0.0136

Correlation matrix:
         [,1]    [,2]    [,3]    [,4]    [,5]    [,6]    [,7]    [,8]    [,9]   [,10]
 [1,]  1.0000  0.0869 -0.1019 -0.0192  0.0592  0.1200  0.1900 -0.2279 -0.1952  0.2436
 [2,]  0.0869  1.0000  0.0334 -0.0954  0.0917  0.0359  0.0469 -0.5204  0.3996 -0.0296
 [3,] -0.1019  0.0334  1.0000  0.1224 -0.1187 -0.0539 -0.0827  0.0323  0.0033  0.0407
 [4,] -0.0192 -0.0954  0.1224  1.0000  0.0121 -0.0068  0.0805  0.0047 -0.0094 -0.0138
 [5,]  0.0592  0.0917 -0.1187  0.0121  1.0000  0.4501 -0.0408 -0.1138 -0.0142 -0.0509
 [6,]  0.1200  0.0359 -0.0539 -0.0068  0.4501  1.0000  0.1010 -0.0064 -0.0375  0.0032
 [7,]  0.1900  0.0469 -0.0827  0.0805 -0.0408  0.1010  1.0000 -0.0620 -0.1661  0.1361
 [8,] -0.2279 -0.5204  0.0323  0.0047 -0.1138 -0.0064 -0.0620  1.0000 -0.5462 -0.0794
 [9,] -0.1952  0.3996  0.0033 -0.0094 -0.0142 -0.0375 -0.1661 -0.5462  1.0000 -0.5932
[10,]  0.2436 -0.0296  0.0407 -0.0138 -0.0509  0.0032  0.1361 -0.0794 -0.5932  1.0000

Median:          135.2506 100.2022 0.0184 0.0022 3.0362 3.2383 2.6272 45.8064 0.2962 -2.0162

Mean:            130.9576  98.3909 0.0182 0.0034 2.9882 5.7268 2.548  44.8697 0.3087 -2.0328
MCD-estimated:
MDC-0.975-Mean:  122.1807  91.4463 0      0      2.1212 1.4752 1.3522 48.7548 0.3095 -2.0631
MDC-0.750-Mean:  122.3408  91.375  0      0      2.0956 1.4755 1.3542 48.7151 0.3095 -2.063
MDC-0.500-Mean:  122.1807  91.4463 0      0      2.1212 1.4752 1.3522 48.7548 0.3095 -2.0631
```

```
Class2: n= 330

Covariance matrix:
           [,1]      [,2]    [,3]    [,4]    [,5]     [,6]     [,7]      [,8]    [,9]   [,10]
 [1,] 4404.4038 -578.3487 -0.0136  0.1671  3.3112 -25.2207 -11.7488  -29.2875 -3.4030  6.9387
 [2,] -578.3487 1172.6146  0.0088  0.0105 -3.5759  27.2982  -2.8230 -106.1587 -0.4449  6.2493
 [3,]   -0.0136    0.0088  0.0006  0.0000  0.0030  -0.0016   0.0031    0.0388 -0.0001 -0.0010
 [4,]    0.1671    0.0105  0.0000  0.0004  0.0140   0.0592   0.0090    0.0122  0.0004 -0.0012
 [5,]    3.3112   -3.5759  0.0030  0.0140  3.3612   9.8051   0.7588    4.3410  0.0311 -0.3178
 [6,]  -25.2207   27.2982 -0.0016  0.0592  9.8051  94.9681   7.0006    6.4833  0.1727 -0.4547
 [7,]  -11.7488   -2.8230  0.0031  0.0090  0.7588   7.0006   3.5637    3.9886  0.0347 -0.2933
 [8,]  -29.2875 -106.1587  0.0388  0.0122  4.3410   6.4833   3.9886   81.8782 -0.2237 -2.8163
 [9,]   -3.4030   -0.4449 -0.0001  0.0004  0.0311   0.1727   0.0347   -0.2237  0.0806 -0.1285
[10,]    6.9387    6.2493 -0.0010 -0.0012 -0.3178  -0.4547  -0.2933   -2.8163 -0.1285  0.4921

Correlation matrix:
         [,1]    [,2]    [,3]    [,4]    [,5]    [,6]    [,7]    [,8]    [,9]   [,10]
 [1,]  1.0000 -0.2545 -0.0083  0.1260  0.0272 -0.0390 -0.0938 -0.0488 -0.1806  0.1490
 [2,] -0.2545  1.0000  0.0104  0.0154 -0.0570  0.0818 -0.0437 -0.3426 -0.0458  0.2602
 [3,] -0.0083  0.0104  1.0000  0.0380  0.0653 -0.0065  0.0669  0.1735 -0.0102 -0.0566
 [4,]  0.1260  0.0154  0.0380  1.0000  0.3821  0.3042  0.2381  0.0672  0.0645 -0.0886
 [5,]  0.0272 -0.0570  0.0653  0.3821  1.0000  0.5488  0.2192  0.2617  0.0597 -0.2471
 [6,] -0.0390  0.0818 -0.0065  0.3042  0.5488  1.0000  0.3805  0.0735  0.0624 -0.0665
 [7,] -0.0938 -0.0437  0.0669  0.2381  0.2192  0.3805  1.0000  0.2335  0.0647 -0.2215
 [8,] -0.0488 -0.3426  0.1735  0.0672  0.2617  0.0735  0.2335  1.0000 -0.0871 -0.4437
 [9,] -0.1806 -0.0458 -0.0102  0.0645  0.0597  0.0624  0.0647 -0.0871  1.0000 -0.6451
[10,]  0.1490  0.2602 -0.0566 -0.0886 -0.2471 -0.0665 -0.2215 -0.4437 -0.6451  1.0000

Median:          171.9031 115.4398 0.0045 0.0037 1.1552 1.4977 1.0339 9.5113 0.4952 -1.7887

Mean:            160.0212 112.5303 0.0051 0.0037 1.1926 2.0731 1.0835 8.8438 0.5102 -1.8096
MCD-estimated:
MDC-0.975-Mean:  155.4624 112.919  0      0      0.5527 0.357  0.4785 8.1871 0.6401 -2.068
MDC-0.750-Mean:  152.3837 109.2034 0      0      0.6731 0.4482 0.5268 8.8607 0.6734 -2.0674
MDC-0.500-Mean:  154.2441 113.6394 0      0      0.5685 0.3695 0.4509 8.3159 0.639  -2.0695

Measures:
Mah.Dist:                       3.1768
Mah.Dist-MCD-0.975:             3.771
Mah.Dist-MCD-0.750:             3.6156
Mah.Dist-MCD-0.500:             3.6156
```


DD-Plot (zonoid): segmentation
Class2
Class1
0.0
0.2
0.4
0.6
0.8
1.0


DD-Plot (random Tukey): segmentation
Class2
Class1
0.0
0.1
0.2
0.3
0.4
0.5