**File Name: Image Segmentation data**

**Source Information**

**https://archive.ics.uci.edu/ml/datasets/image+segmentation**

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.

**Attribute Information:**

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| **Attribute Name** | **Description** |
|  |  |
| region-centroid-col | the column of the center pixel of the region. |
| region-centroid-row | the row of the center pixel of the region. |
| region-pixel-count | the number of pixels in a region = 9. |
| 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 |
| short-line-density-2 | same as short-line-density-5 but counts lines of high contrast, greater than 5. |
| 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. |
| vegde-sd | (see 6) |
| hedge-mean | measures the contrast of vertically adjacent pixels. Used for horizontal line detection. |
| hedge-sd | (see 8). |
| intensity-mean | the average over the region of (R + G + B)/3 |
| rawred-mean | the average over the region of the R value. |
| rawblue-mean | the average over the region of the B value. |
| rawgreen-mean | the average over the region of the G value. |
| exred-mean | measure the excess red |
| exblue-mean | measure the excess blue |
| exgreen-mean | measure the excess green |
| value-mean | 3-d nonlinear transformation of RGB. (Algorithm can be found in Foley and VanDam, Fundamentals of Interactive Computer Graphics) |
| saturatoin-mean | 3-d nonlinear transformation of RGB |
| hue-mean | 3-d nonlinear transformation of RGB |
| Classes | brickface, sky, foliage, cement, window, path, grass |

1. Fit a neural network model to identify the image type