## List of Graphs

<table>
<thead>
<tr>
<th>Graph No.</th>
<th>Title of the Graph</th>
<th>Page no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graph 4.1</td>
<td>Indicate Bar graph shows quality measures for ZN – Stain sputum smear digital images before and after enhancement using two techniques.</td>
<td>63</td>
</tr>
<tr>
<td>Graph 4.2</td>
<td>Original image, Histogram for Red color for the original Image, Histogram of Green color for the original Image and Histogram of Blue color for the original Image.</td>
<td>64</td>
</tr>
<tr>
<td>Graph 4.3</td>
<td>Contrast stretching image, Histogram for red color for the contrast stretching image, Histogram of Green color for the contrast stretching image and Histogram of Blue color for the contrast stretching image.</td>
<td>65</td>
</tr>
<tr>
<td>Graph 4.4</td>
<td>Sharpened image, Histogram for Red color for the sharpened image, Histogram of Green color for the sharpened image and histogram of blue color.</td>
<td>65</td>
</tr>
<tr>
<td>Graph 4.5</td>
<td>Moment invariants for 5 images.</td>
<td>81</td>
</tr>
<tr>
<td>Graph 4.6</td>
<td>Eccentricity of objects.</td>
<td>82</td>
</tr>
<tr>
<td>Graph 4.7</td>
<td>Perimeter of objects.</td>
<td>83</td>
</tr>
<tr>
<td>Graph 4.8</td>
<td>Area graph of objects.</td>
<td>84</td>
</tr>
<tr>
<td>Graph 4.9</td>
<td>Compactness of objects.</td>
<td>85</td>
</tr>
<tr>
<td>Graph 4.10</td>
<td>Recognition using SVM on 250 objects.</td>
<td>89</td>
</tr>
<tr>
<td>Graph 4.11</td>
<td>Recognition using SVM on 500 objects.</td>
<td>90</td>
</tr>
<tr>
<td>Graph 4.12</td>
<td>Recognition using SVM on 750 objects.</td>
<td>90</td>
</tr>
<tr>
<td>Graph 4.13</td>
<td>Recognition using SVM on 1000 objects.</td>
<td>91</td>
</tr>
<tr>
<td>Graph 4.14</td>
<td>Train samples variation on test samples.</td>
<td>92</td>
</tr>
<tr>
<td>Graph 4.15</td>
<td>Recognition using Gaussian on 250 objects.</td>
<td>95</td>
</tr>
</tbody>
</table>
Graph 4.16   Recognition using Gaussian on 500 objects.  
Graph 4.17   Recognition using Gaussian on 750 objects.  
Graph 4.18   Recognition using Gaussian on 1000 objects.  
Graph 4.19   Performance measures by constant train samples & variation on test samples.  
Graph 4.20   Recognition using K-NN on 250 objects.  
Graph 4.21   Recognition using K-NN on 500 objects.  
Graph 4.22   Recognition using K-NN on 750 objects.  
Graph 4.23   Recognition using K-NN on 1000 objects.  
Graph 4.24   Performance measures by constant train samples & variation on test samples.  
Graph 4.25   Chart shows comparative study of SVM, K-NN, Gaussian classifiers.  
Graph 4.26   Chart shows accuracy for Non-Tb cells.  
Graph 4.27   Chart shows accuracy for M-Tb cells.  
Graph 4.28   Chart shows specificity.  
Graph 4.29   Chart shows sensitivity.  
Graph 4.30   Chart shows PCA M.TB cells.  
Graph 4.31   Chart shows PCA Non-TB cells.  
Graph 4.32   Performance plot for five set test image samples.  
Graph 4.33   Performance for 200 test image.  
Graph 4.34   Validation performance.  
Graph 4.35   Gradient plot.  
Graph 4.36   The Receiver operating characteristic (ROC).  
Graph 4.37   Confusion matrix for image base analysis.  
Graph 4.38   Performance for 100 test images features.  
Graph 4.39   ROC plot for feature base analysis of object.  
Graph 4.40   Confusion matrix for feature base results.  
Graph 4.41   Histogram for total area of M.TB cells of example 3.  
Graph 4.42   Histogram for total area of M.TB cells of example 4  
Graph 4.43   Accuracy M.TB cells using Gaussian 250 objects.
Graph 4.44  Accuracy  M.TB cells  using Gaussian 500 objects.  131
Graph 4.45  Accuracy  M.TB cells  using Gaussian 750 objects.  132
Graph 4.46  Accuracy  M.TB cells  using Gaussian 1000 objects.  132
Graph 4.47  Non-TB cells  using Gaussian 250 objects.  133
Graph 4.48  Accuracy Non-TB cells  using Gaussian 500 objects.  133
Graph 4.49  Accuracy Non-TB cells  using Gaussian 750 objects.  134
Graph 4.50  Accuracy Non-TB cells  using Gaussian 1000 objects.  134
Graph 4.51  Specificity for Gaussian 250 objects.  135
Graph 4.52  Specificity for Gaussian 500 objects.  135
Graph 4.53  Specificity for Gaussian 750 objects.  136
Graph 4.54  Specificity for Gaussian 1000 objects.  136
Graph 4.55  Accuracy  M.TB cells  using SVM on 250 objects.  137
Graph 4.56  Accuracy  M.TB cells  using SVM on 500 objects.  137
Graph 4.57  Accuracy  M.TB cells  using SVM on 750 objects.  138
Graph 4.58  Accuracy  M.TB cells  using SVM on 1000 objects.  138
Graph 4.59  Accuracy Non-TB cells  using SVM on 250 objects.  139
Graph 4.60  Accuracy Non-TB cells  using SVM on 500 objects.  139
Graph 4.61  Accuracy Non-TB cells  using SVM on 750 objects.  140
Graph 4.62  Accuracy Non-TB cells  using SVM on 1000 objects.  140
Graph 4.63  Specificity  using SVM 250 objects.  141
Graph 4.64  Specificity  using SVM 500 objects.  141
Graph 4.65  Specificity  using SVM 750 objects.  142
Graph 4.66  Specificity  using SVM 1000 objects.  142
Graph 4.67  Accuracy M.TB cells using K-NN on 250 objects.  143
Graph 4.68  Accuracy M.TB cells using K-NN on 500 objects.  143
Graph 4.69  Accuracy M.TB cells using K-NN on 750 objects.  144
Graph 4.70  Accuracy M.TB cells using K-NN on 1000 objects.  144
Graph 4.71  Accuracy Non-TB cells using K-NN on 250 objects.  145
Graph 4.72  Accuracy Non-TB cells using K-NN on 500 objects.  145
Graph 4.73  Accuracy Non-TB cells using K-NN on 750 objects.  146
Graph 4.74  Accuracy Non-TB cells using K-NN on 1000 objects.  146
<table>
<thead>
<tr>
<th>Graph 4.75</th>
<th>Specificity using K-NN 250 objects.</th>
<th>147</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graph 4.76</td>
<td>Specificity using K-NN 500 objects.</td>
<td>147</td>
</tr>
<tr>
<td>Graph 4.77</td>
<td>Specificity using K-NN 750 objects.</td>
<td>148</td>
</tr>
<tr>
<td>Graph 4.78</td>
<td>Specificity using K-NN 1000 objects.</td>
<td>148</td>
</tr>
</tbody>
</table>