|  |  |  |  |
| --- | --- | --- | --- |
| Function | Use find | Modified | Finished |
| ApplyOptimalGraphGrammarOpeation.m |  |  |  |
| ComputePrimitiveGraphElasticEnergy.m | X | Yes | Yes |
| ElPrincGraph.m | X |  |  |
| GetNeighbourhoodOnTheGraph.m | X |  |  |
| GraphGrammarOperation.m | X |  | Yes |
| MakeUniformElasticMatrix.m |  |  | Yes |
| PartitionData.m |  | Yes | Yes |
| PrimitiveElasticGraphEmbedment.m | X | Yes |  |
| ReportOnPrimitiveGraphEmbedment.m |  |  | Yes |
| Utils |  |  |  |
| ComputeWeightedAverageOld.m | X | No | Yes |
| ComputeWeightedAverage.m |  |  | Yes |
| DecodeElasticMatrix.m | X | Yes | Yes |
| Encode2ElasticMatrix.m |  |  | Yes |
| fastkmeans.m |  |  |  |
| getColumnOfTable.m |  |  |  |
| getPrimitiveGraphStructureBarCode.m |  |  |  |
| partition\_nodes\_by\_branch.m |  |  |  |
| project\_point\_onto\_graph.m |  |  |  |
| strSplit.m |  |  |  |
| Visualisation |  |  |  |
| accuracyComplexityPlot.m |  |  |  |
| computeMetroMapLayout.m |  |  |  |
| createLabelColorMap.m |  |  |  |
| createLabelColorMapList.m |  |  |  |
| drawGraph2D.m |  |  |  |
| drawLayout.m |  |  |  |
| drawMetroMap.m |  |  |  |
| drawPieChart.m |  |  |  |
| drawPieChartsMetroMap.m |  |  |  |
| drawPieChartsProc.m |  |  |  |
| makeAnimation.m |  |  |  |
| PCAView.m |  |  |  |
| plotMSDEnergyPlot.m |  |  |  |
| plot\_arc.m |  |  |  |
| plot\_circle.m |  |  |  |

Calculation of elastic energy.

where is set of edges, is sum of squared distances from each the data point to nearest node, is number of data points.