

LIST OF FIGURES

1.1 Global Research Design	4
2.1 Separation Distance	8
2.2 Min Max Distance	9
2.3 Comparison of Hausdorff distance with centroid distance	10
2.4 Illustration of DBSCAN	11
2.5 Three level model spatial[1]	14
2.6 Spatial Data Point	15
2.7 Spatial Data Line	15
2.8 Spatial data of Nebraska County	16
2.9 Dendogram	17
2.10 Density based clustering	17
2.11 Partition with $n = 11, k = 3$	18
2.12 Ilustration of CLARANS Algorithm	21
2.13 Hierarchical generalization using DBLEARN	22
2.14 Scatter Plot of Variables	29
2.15 SSE of Cluster	30
2.16 Hirarchical Region in Indonesia	33
3.1 Rectangle Region	36
3.2 Comparison of Region	36
3.3 Modified PDF	37
3.4 Idea of addition spatial intrinsic attribute	38
3.5 Modified Davies-Bouldin	42
3.6 Dummy Data Region	45
3.7 Region Dataset in Jakarta Province	45
3.8 Share Boundary between polygon	47
3.9 Crime Maps in Jakarta	49
3.10 Research Design	51
4.1 Dummy Region Dataset with different e	54
4.2 Result Cluster for dummy data using non-spatial attribute with different k	55
4.3 Result cluster for dummy data set using spatial attribute	57
4.4 Result cluster for dummy data set using more than a spatial extrinsic	59
4.5 Result Cluster modified PDF Vs PDF with different k	63
4.6 Comparison modified PDF and PDF depend on SSE	64
4.7 Comparison modified PDF and PDF depend on DB^P	64
4.8 Result cluster for data Jakarta crime	65
4.9 Significances of spatial attribute in spatial dummy region clustering	68
4.10 Significances of spatial attribute in spatial crime region clustering	70
4.11 Visually result cluster from cluster validity	71