Clustering

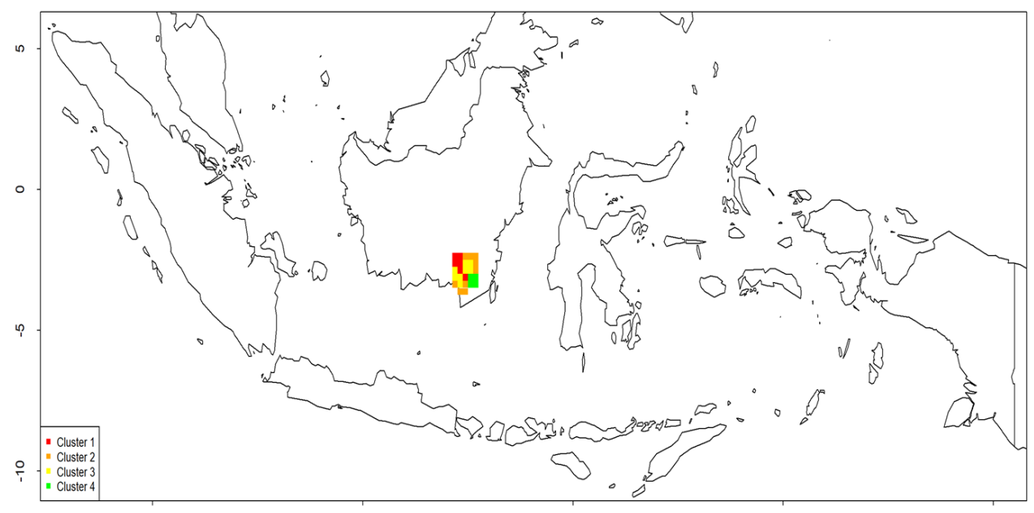
This research is used to identify which areas have similar characteristics using forest fire area and rainfall data in Banjar District.

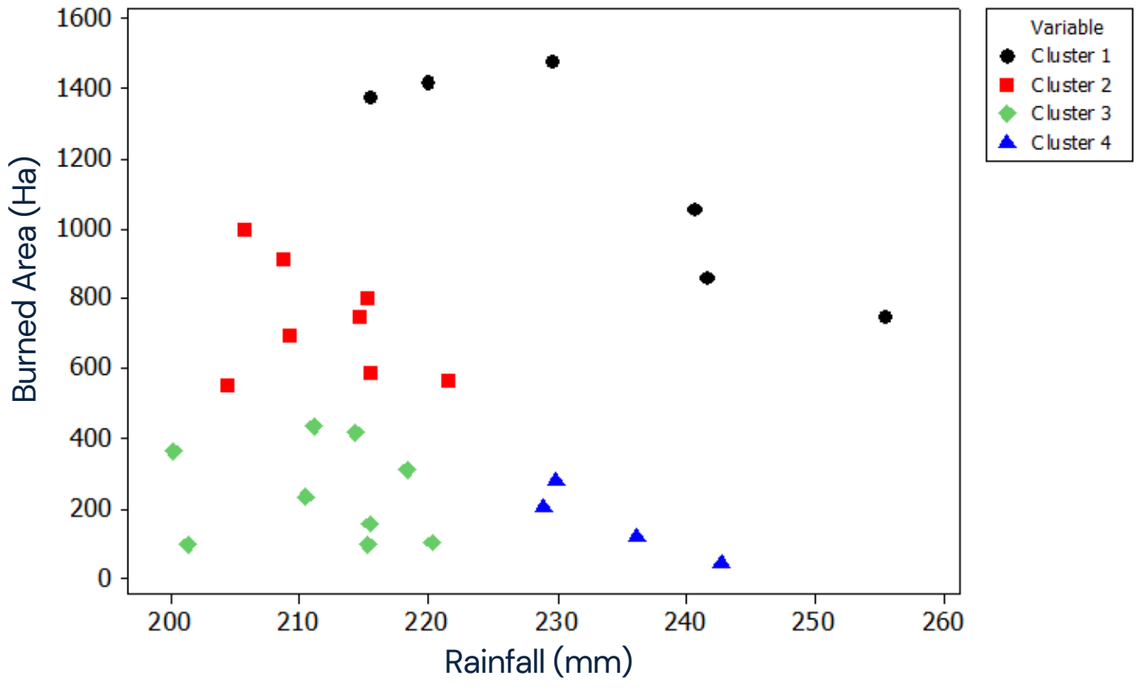
DATA

There are two variables in this research. Rainfall data obtained from the Tropical Rainfall Measurement Mission (TRMM) and data on the area of forest fires from the Global Fire Emission Database (GFED4).

	K-means Clustering	Ward's Clustering
3	R-square = 0.711322 Pseudo F = 29.56887 ICD Rate = 0.288678	R-square = 0.606315 Pseudo F = 18.48119 ICD Rate = 0.393685
4	R-square = 0.711322 Pseudo F = 18.89122 ICD Rate - 0.288678	**R-square = 0.81898** **Pseudo F = 34.68599** **ICD Rate = 0.18102**
5	R-square = 0.711322 Pseudo F = 13.5524 ICD Rate = 0.288678	R-square = 0.81898 Pseudo F = 24.88343 ICD Rate = 0.18102

After comparing 2 clustering methods with different number of clusters, the best result is the Ward's Clustering with 4 clusters.





CLUSTER 1

Area with 700 Ha - 1400 Ha burned area and 215 mm - 250 mm rainfall.

CLUSTER 2

Area with 550 Ha - 993 Ha burned area and 204 mm - 221 mm rainfall.

CLUSTER 3

Area with 92 Ha - 433 Ha burned area and 200 mm - 220 mm rainfall.

CLUSTER 4

Area with 39 Ha - 279 Ha burned area and 228 mm - 242 mm rainfall.