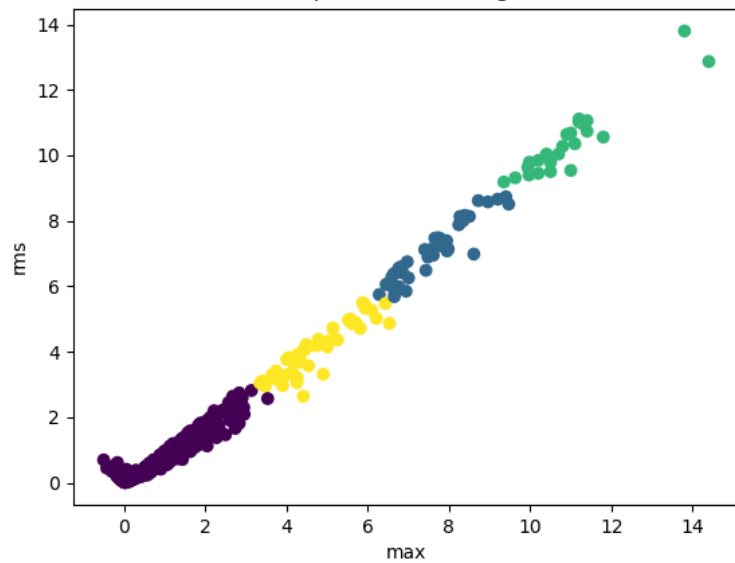
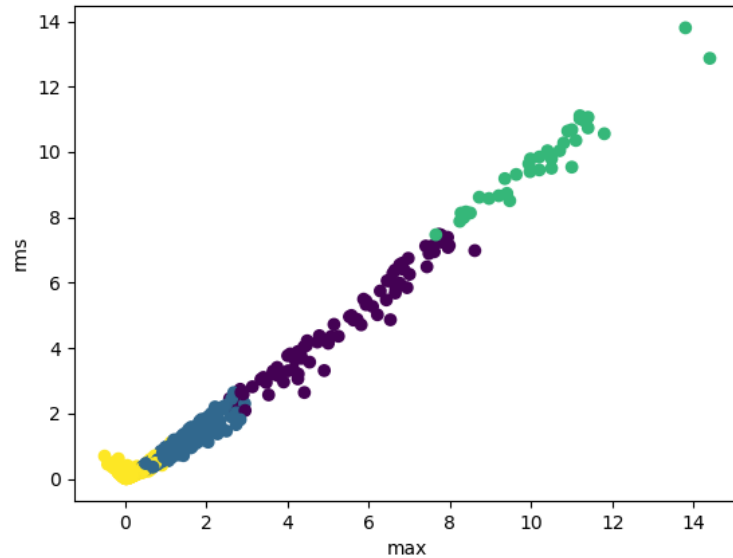


10 kind of Clustering

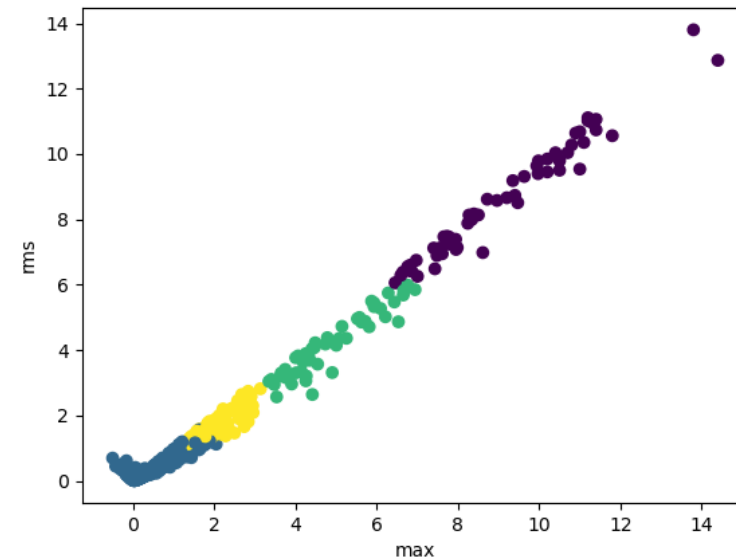
spectral clustering



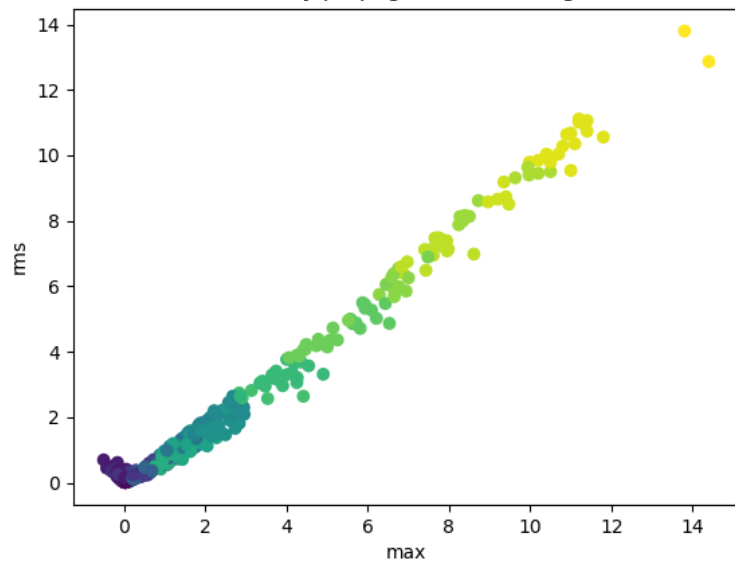
birch clustering



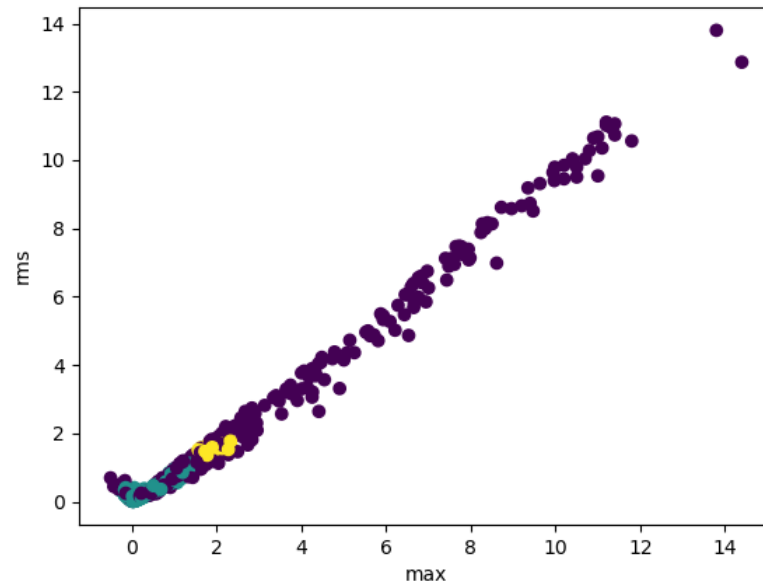
agglomerative clustering



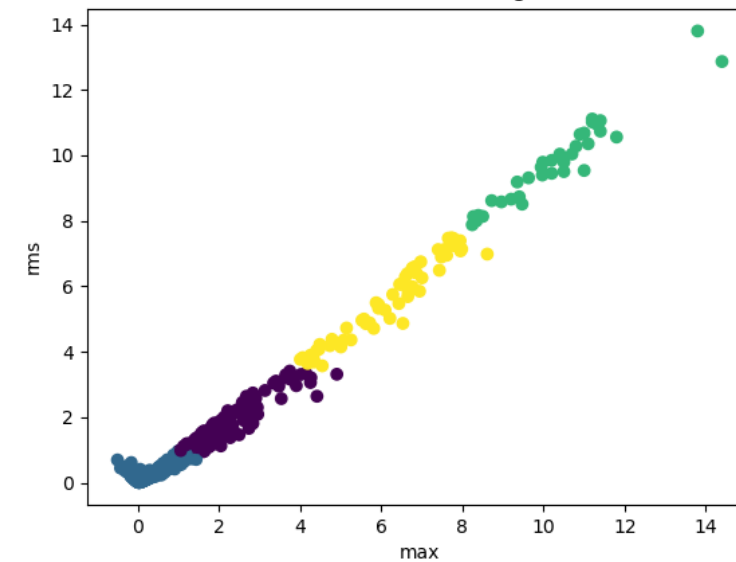
affinity propagation clustering

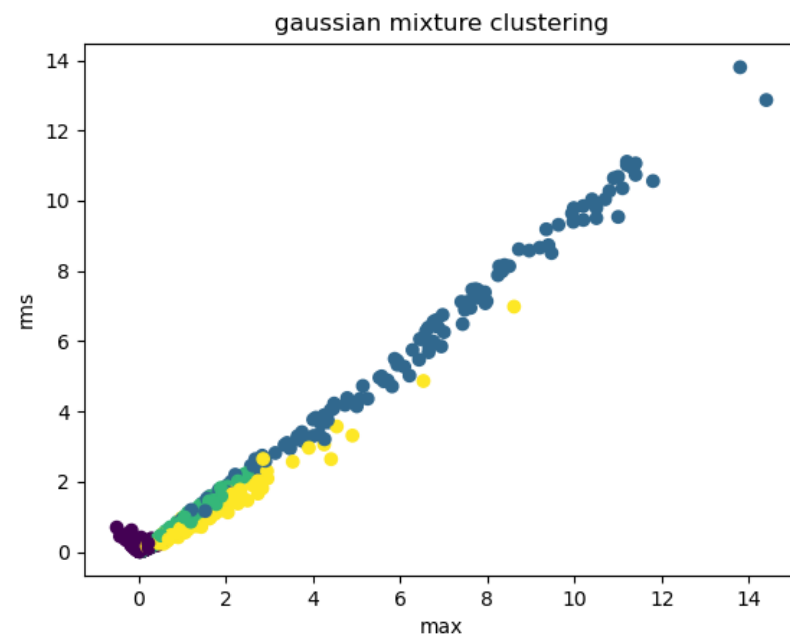
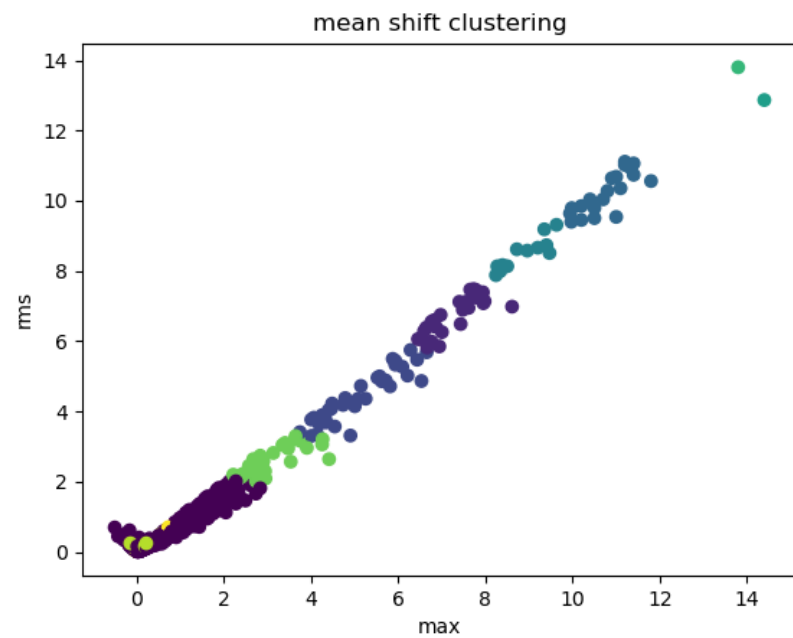
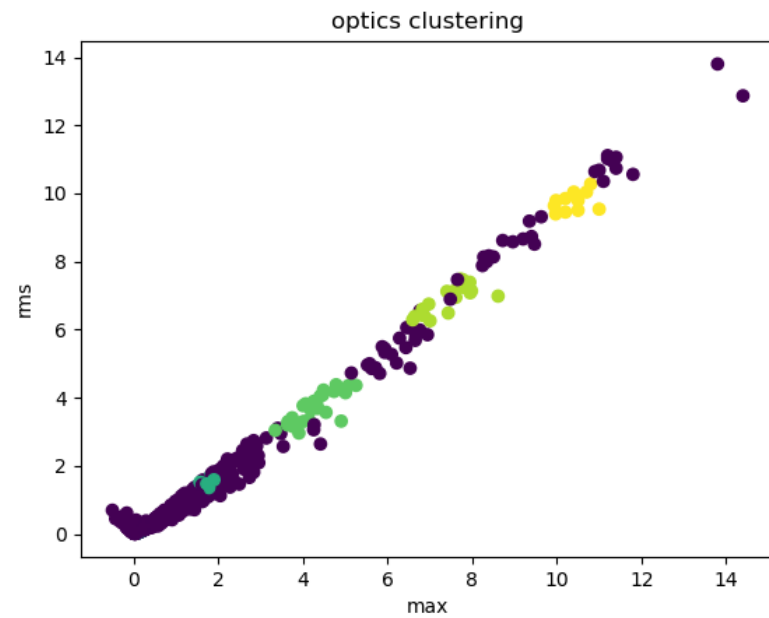
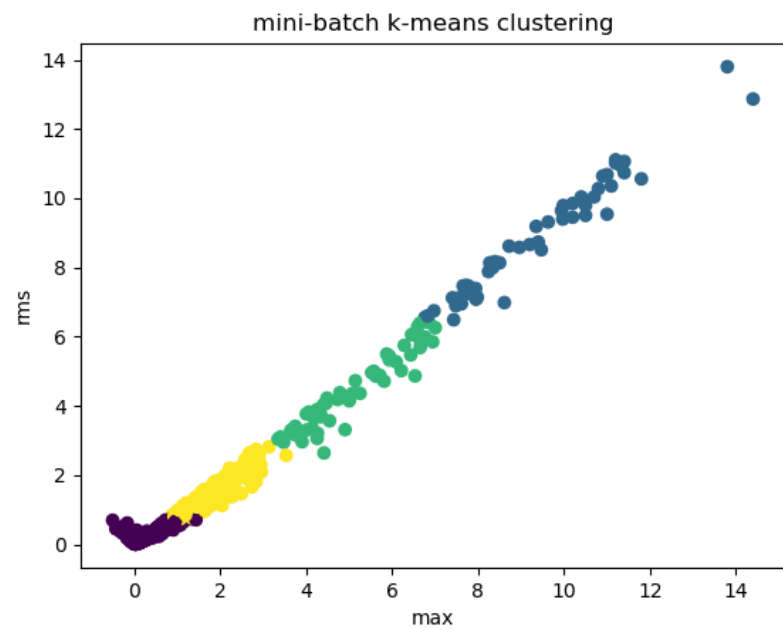


dbscan clustering



k-means clustering





SCORE LIST

RESULT ONE

- ✓ spectral clustering for k: 4 Score=**71.940 %**
- ✓ birch clustering for k: 4 Score=**53.978 %**
- ✓ agglomerative clustering for k: 4 Score=**53.925 %**
- ✓ affinity propagation clustering Score=**23.725 %**
- ✓ DB scan clustering Score=**43.870 %**
- ✓ k-means clustering for k: 4 Score=**56.341 %**
- ✓ mini-batch k-means for k: 4 Score=**57.942 %**
- ✓ optics clustering Score= **-49.018 %**
- ✓ mean shift clustering Score= **63.568 %**
- ✓ gaussian mixture clustering Score= **2.412 %**

RESULT TWO

- ✓ spectral clustering for k: 4 Score=**72.267 %**
- ✓ birch clustering for k: 4 Score=**41.000 %**
- ✓ agglomerative clustering for k: 4 Score=**55.086 %**
- ✓ affinity propagation clustering Score=**22.219 %**
- ✓ DB scan clustering Score=**27.277 %**
- ✓ k-means clustering for k: 4 Score=**57.329 %**
- ✓ mini-batch k-means for k: 4 Score=**55.251 %**
- ✓ optics clustering Score= **-49.140 %**
- ✓ mean shift clustering Score= **54.219 %**
- ✓ gaussian mixture clustering Score= **8.770 %**