

Accurate Ellipses Detection based on Co-clustering Algorithm

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Project Target

To detect ellipses in the images/videos.



Figure: Input



Figure: Output

Methods

- ▶ To detect the arc segments;
- ▶ (To form arcs;)
- ▶ To predict the 5 parameters for ellipses;
- ▶ Co-clustering;
- ▶ Validation.

Cluster/Co-cocluster

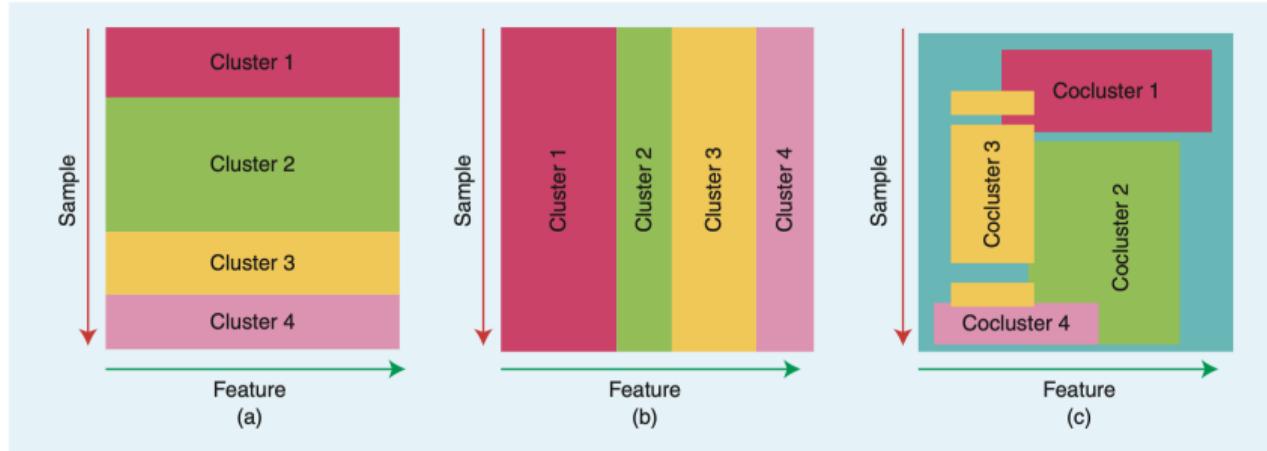


Figure: cocluster method

Pilot Result

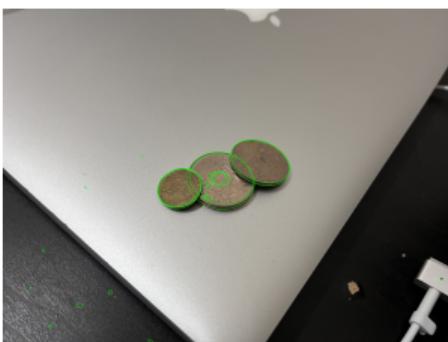


Figure: Easy Examples



Figure: Complex Examples

Summary

1. Co-clustering is effective to grouping data with good accuracy taking ellipses for examples.
2. Co-clustering can serve as an unsupervised learning model in grouping problems.

Q&A

Thank you!