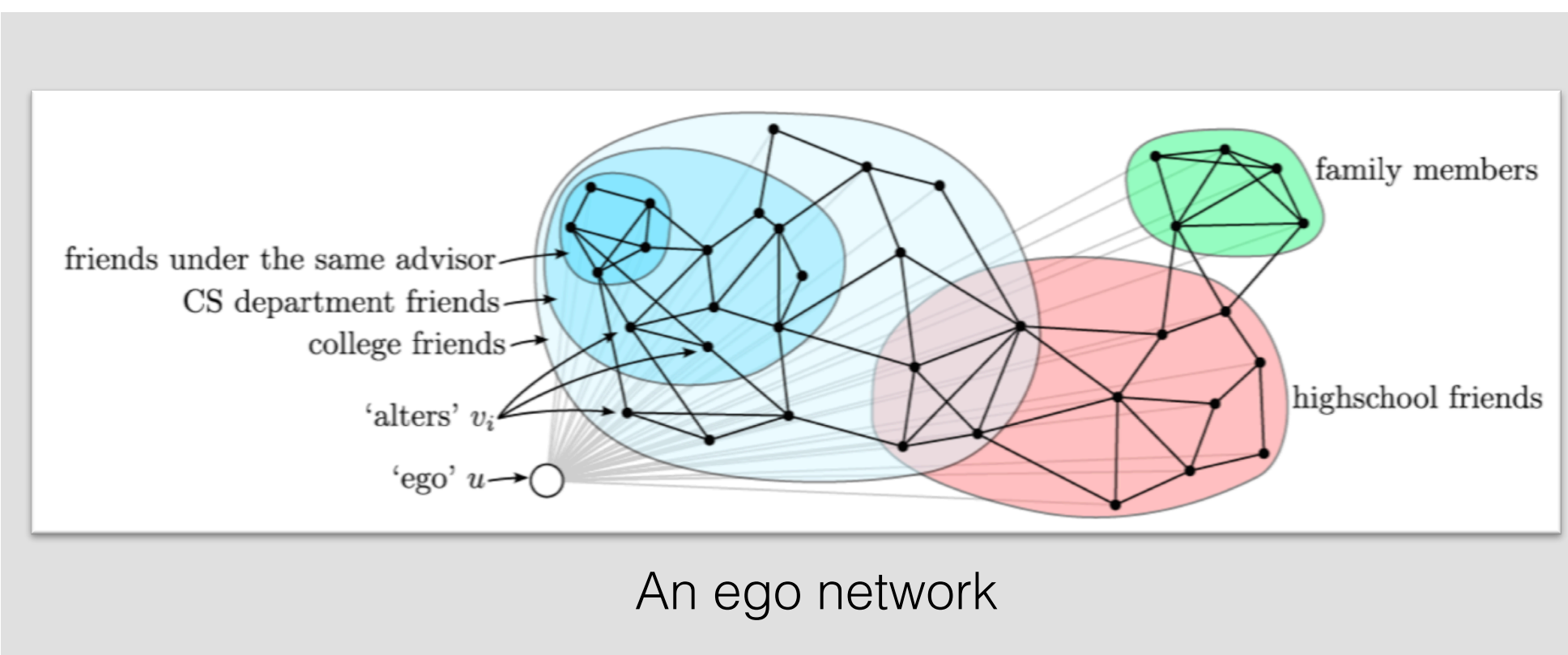
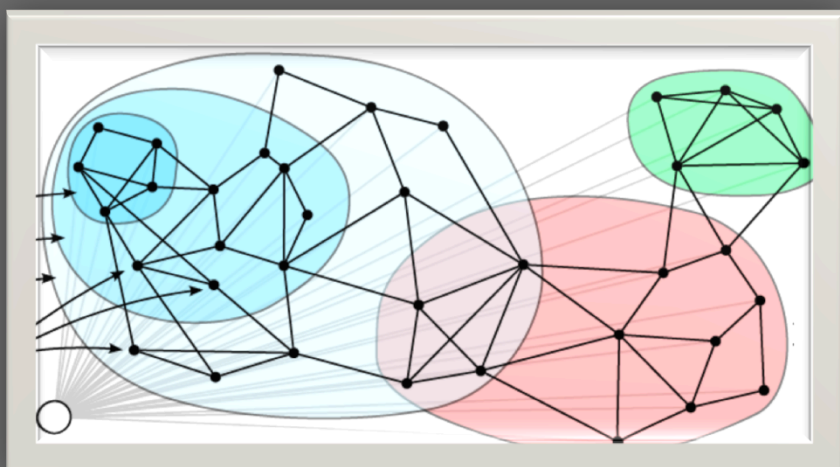


Determining Circles in Social Networks

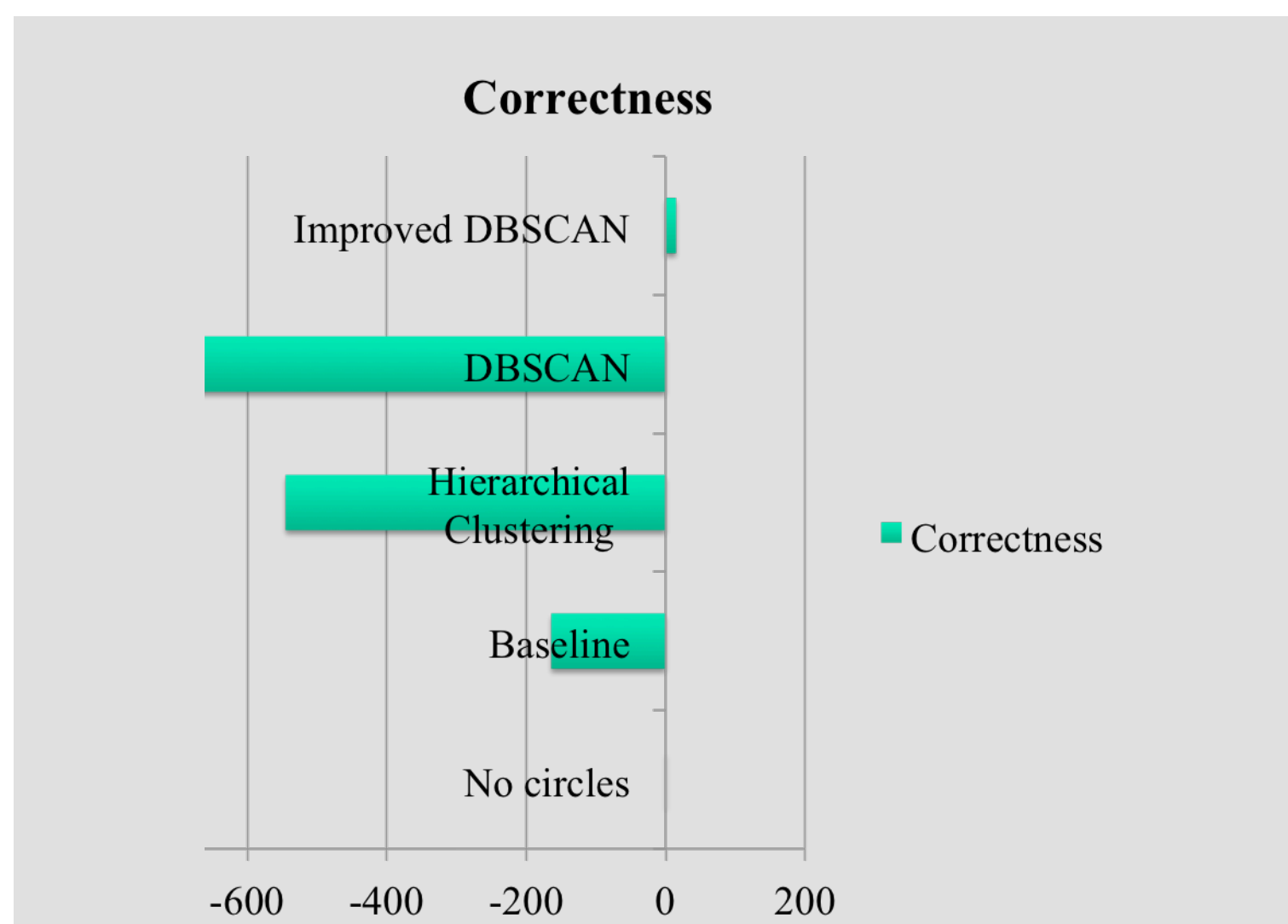
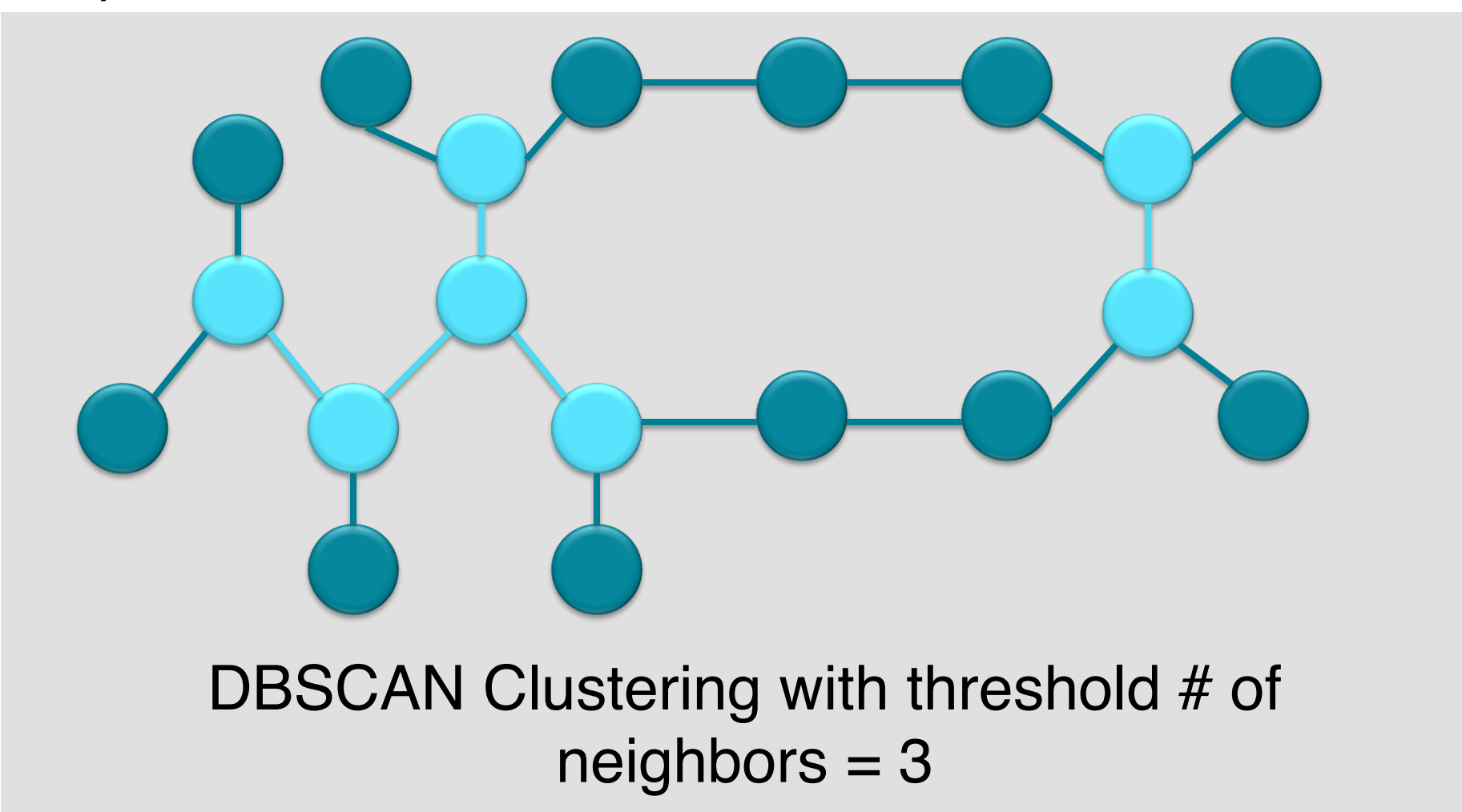
A cluster analysis



An ego network

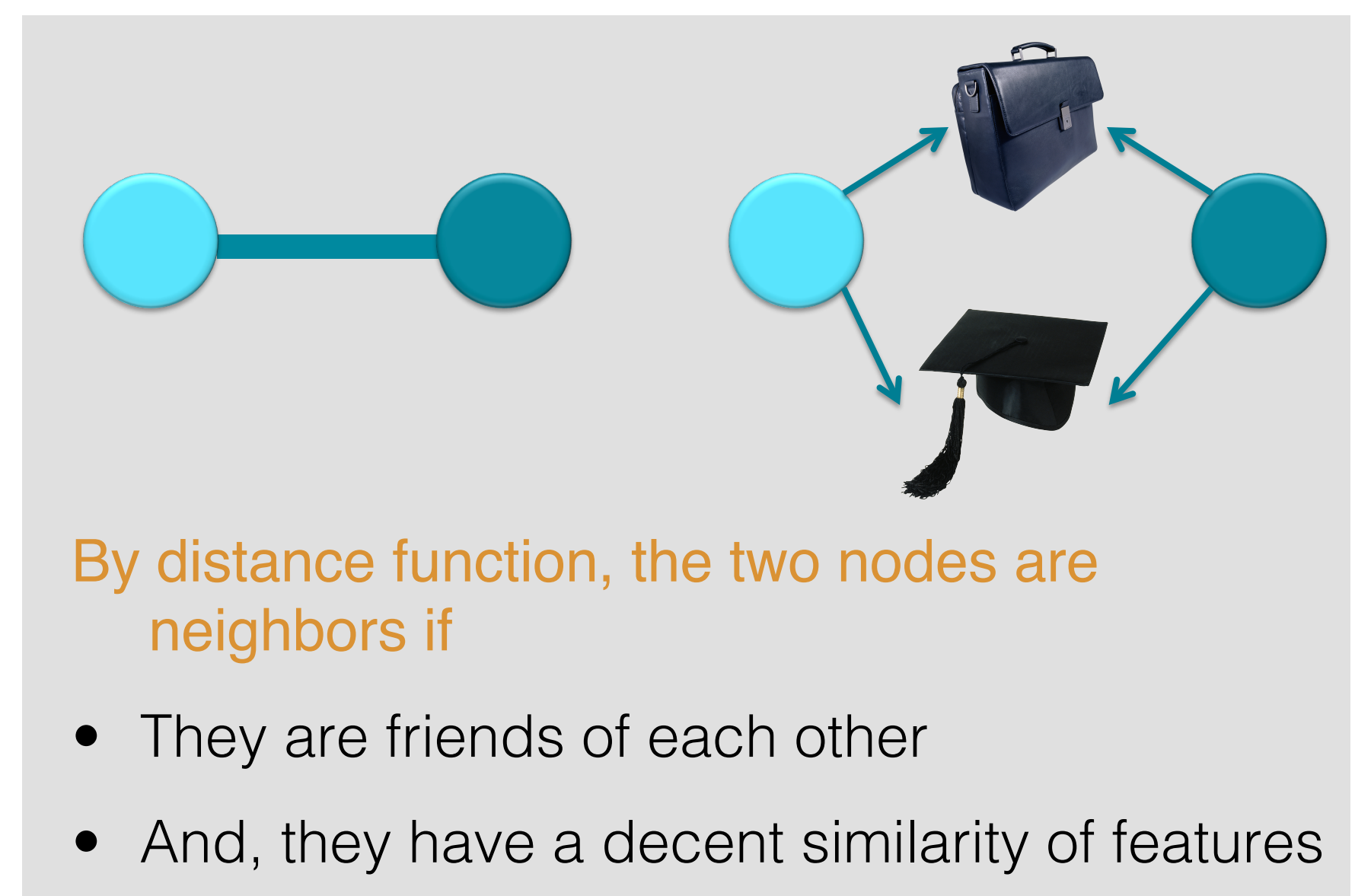
Our Algorithm: DBSCAN

- Forms circles based on node density, which is a measure of the number of neighbors a node has.
- Neighbors are determined using a combination of their connectedness in the social network and their common profile information



Overview

- Social circles help users organize their social networks
- Manually creating circles is tedious
- We seek to automatically infer a user's social circles using information gained from their friends' profiles and their social network structure



Error analysis

- We analyzed the error rates of 4 different algorithms. Same error metric as one posted on Kaggle challenge
- Improved DBSCAN has the lowest error rate

	Correctness
No circles	0
Baseline	-164
Hierarchical Clustering	-545
DBSCAN	-2146
Improved DBSCAN	15