Subgroup Identification in Alzheimer’s Disease with the help of Clustering Approaches

Tamara Raschka, 18th Sep 2018
Scientists challenge

- Alzheimer’s disease is multifactorial and heterogeneous
- Almost all trials failed in the past

- Subgroup identification based on genomic data may help to identify mechanisms involved in different subtypes of the disease
Data
- Genomic data from patients of Alzheimer cohort (n=223)
- Summarized scores for each patient and each mechanism of NeuroMMSig

Method
- Non-negative matrix factorization (NMF)
- Introduction of meta-features
- Clustering patients based on the factorization
Results
Results
Next steps

- Biological interpretation of mechanisms belonging to each cluster
- Integration of longitudinal aspects
- Comparative clustering of additional datasets