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



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Scientific challenge

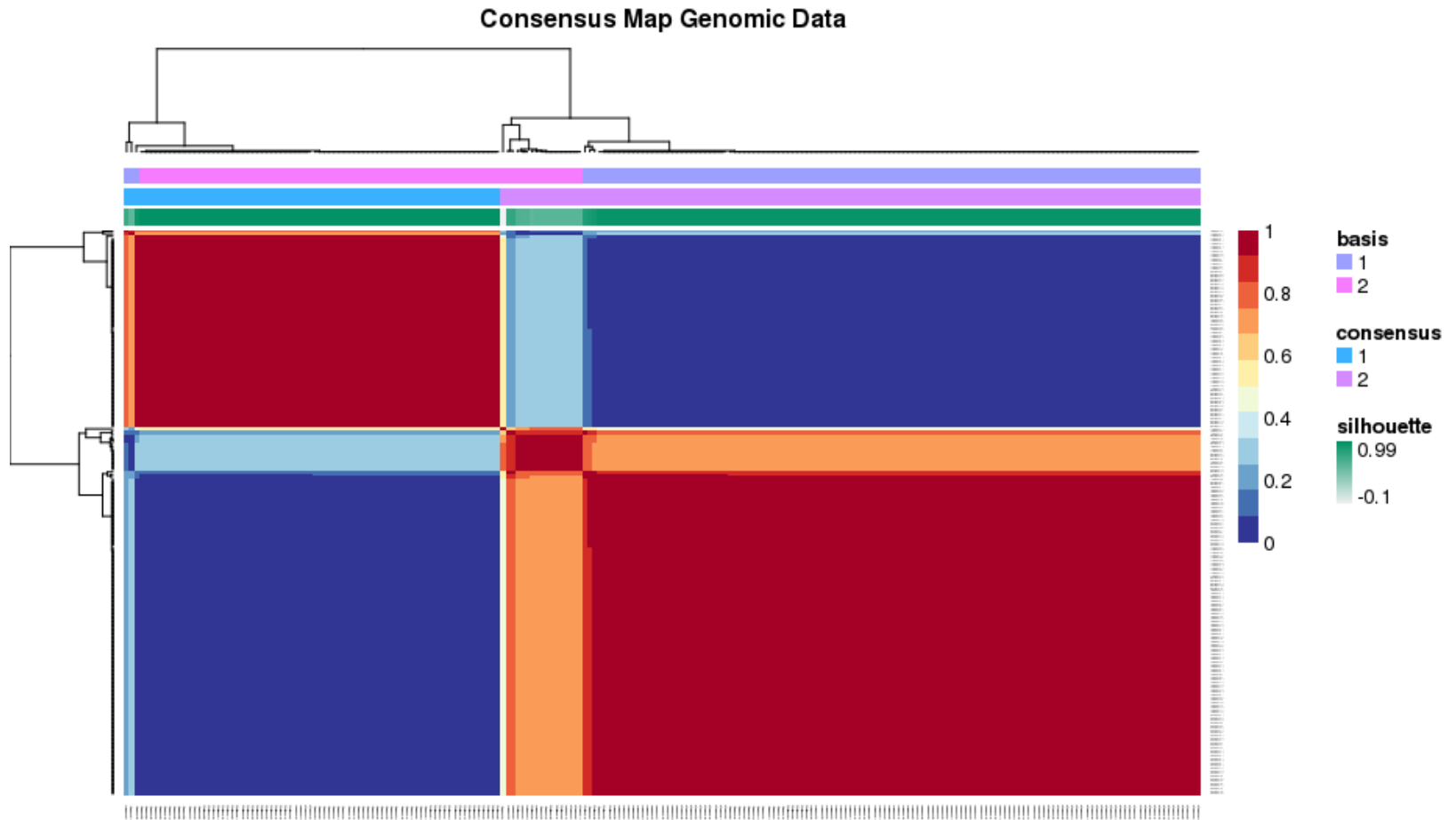
- Alzheimer's disease is multifactorial and heterogeneous
- Almost all trials failed in the past

- Subgroup identification based on genomic data may help to identify mechanisms involved in different subtypes of the disease

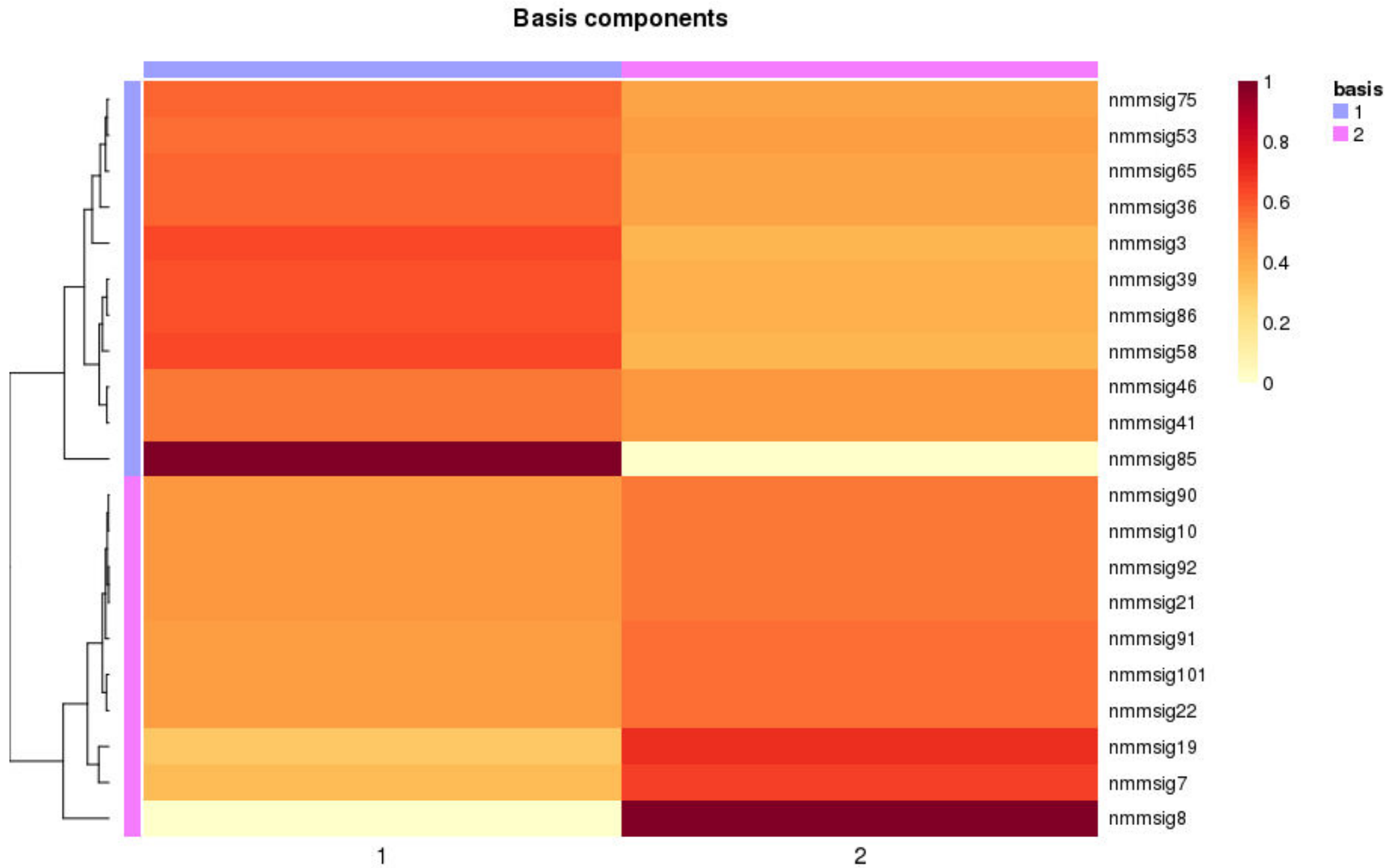
Strategy

- 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

