# Profiling application users


Presentation and visualization of results

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# GOAL

Characterizing the group of potential users to whom ads can be targeted

# Data analysis process

Exploratory Analysis

Output: 551 subjects

Tool: Sweetviz, correlation matrix

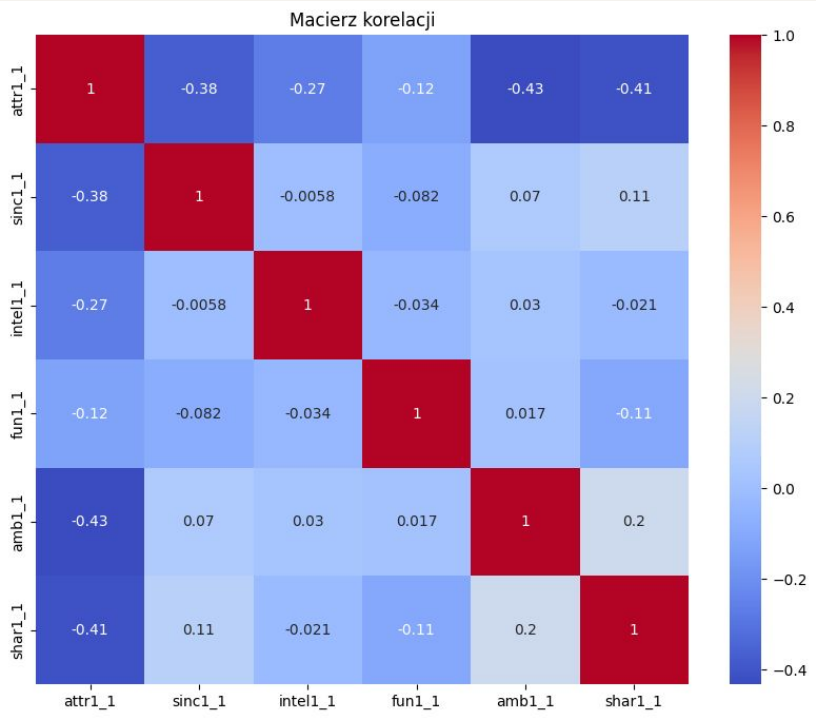
Purpose: Understanding data distribution, identifying missing values, basic descriptive statistics.

Data Preparation

Removing duplicates and filling missing values (filling gaps with zeros).

Data standardization with StandardScaler

# Data selection




## Fun Feature

# Clustering Method

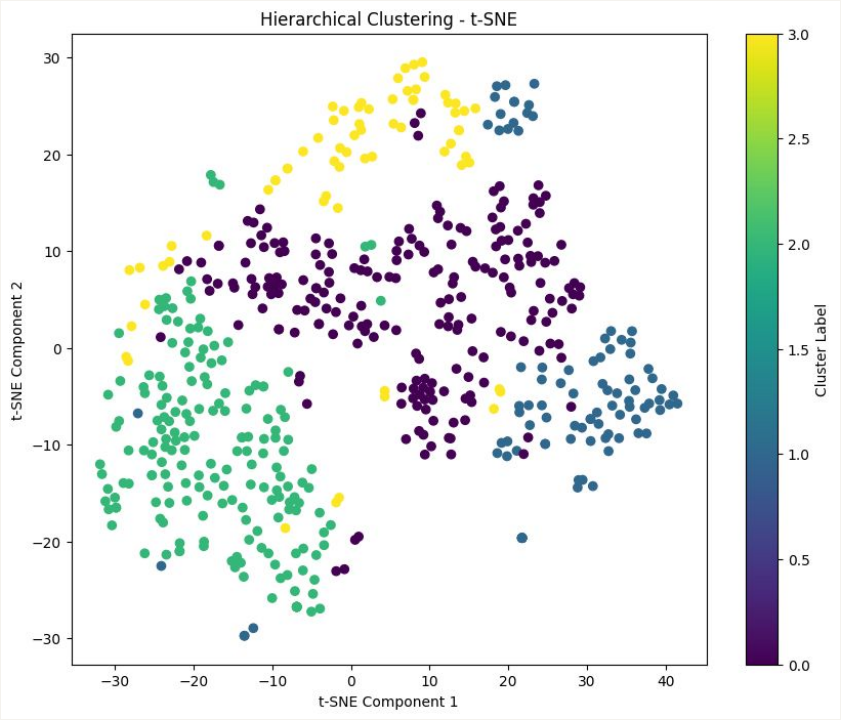
Algorithm: Hierarchical Clustering (Agglomerative Clustering).

Number of clusters: 4.

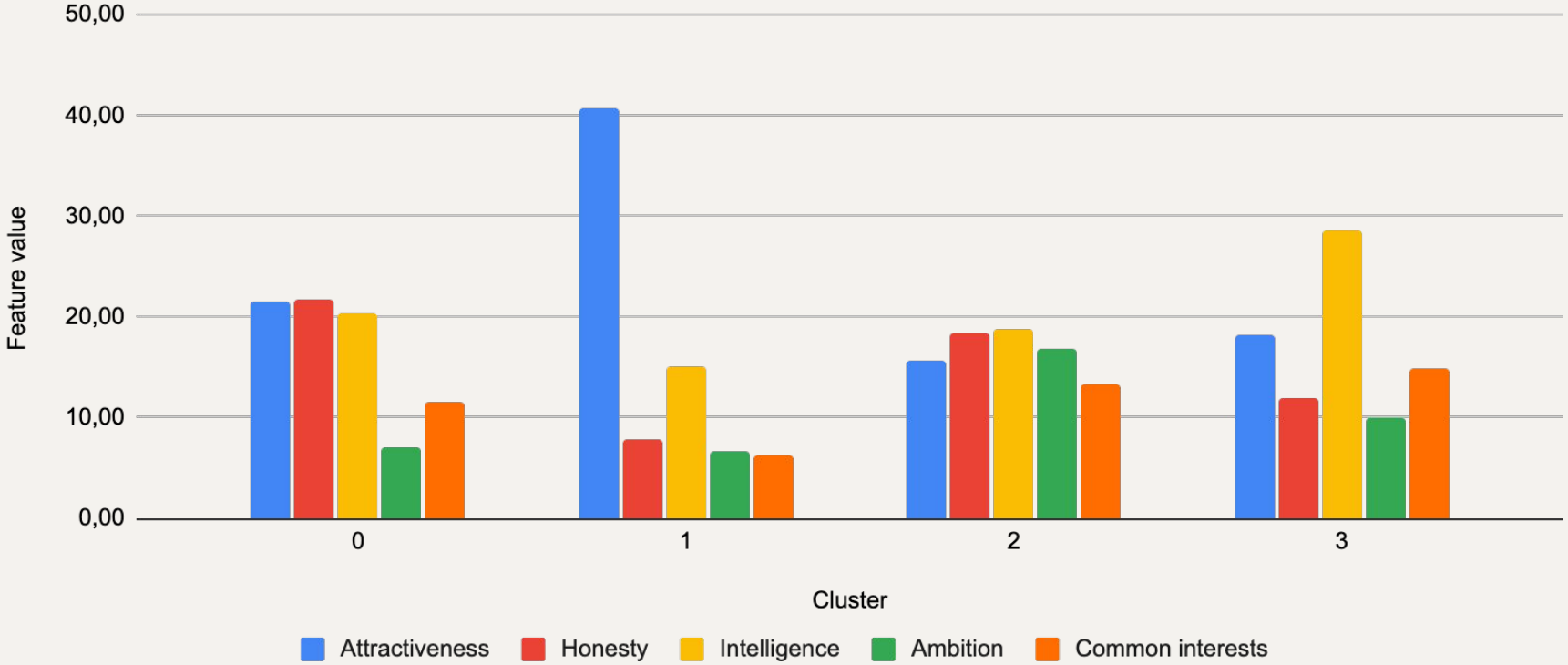
Distance measure: Euclidean.

Connection method: Ward

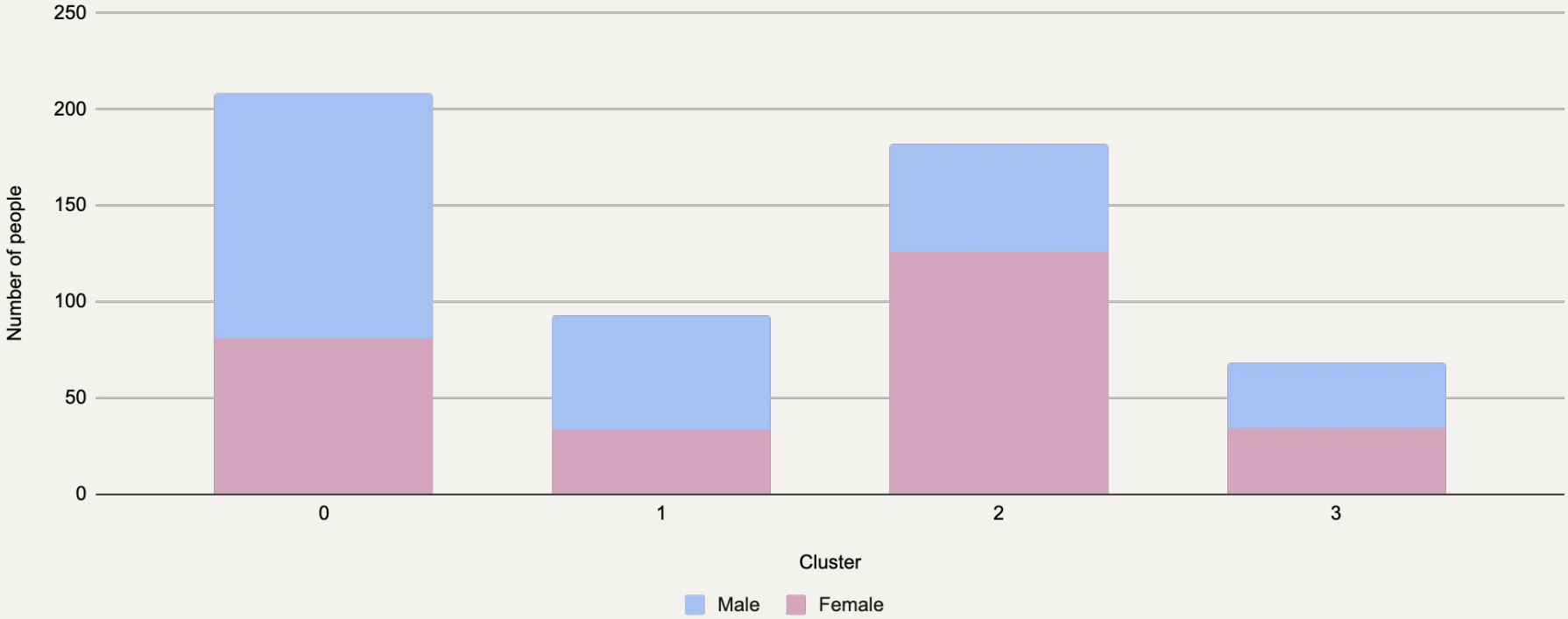
Evaluation: Silhouette method



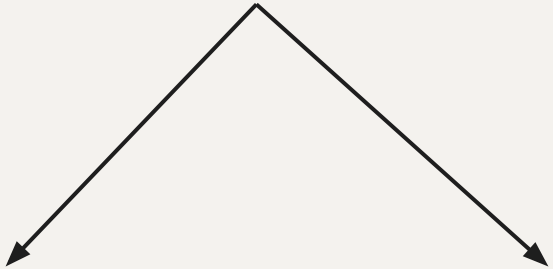
# Distribution of desired feature values in clusters



# Rozkład płci w klastrach



Data Split



## Women

cluster - no. of people

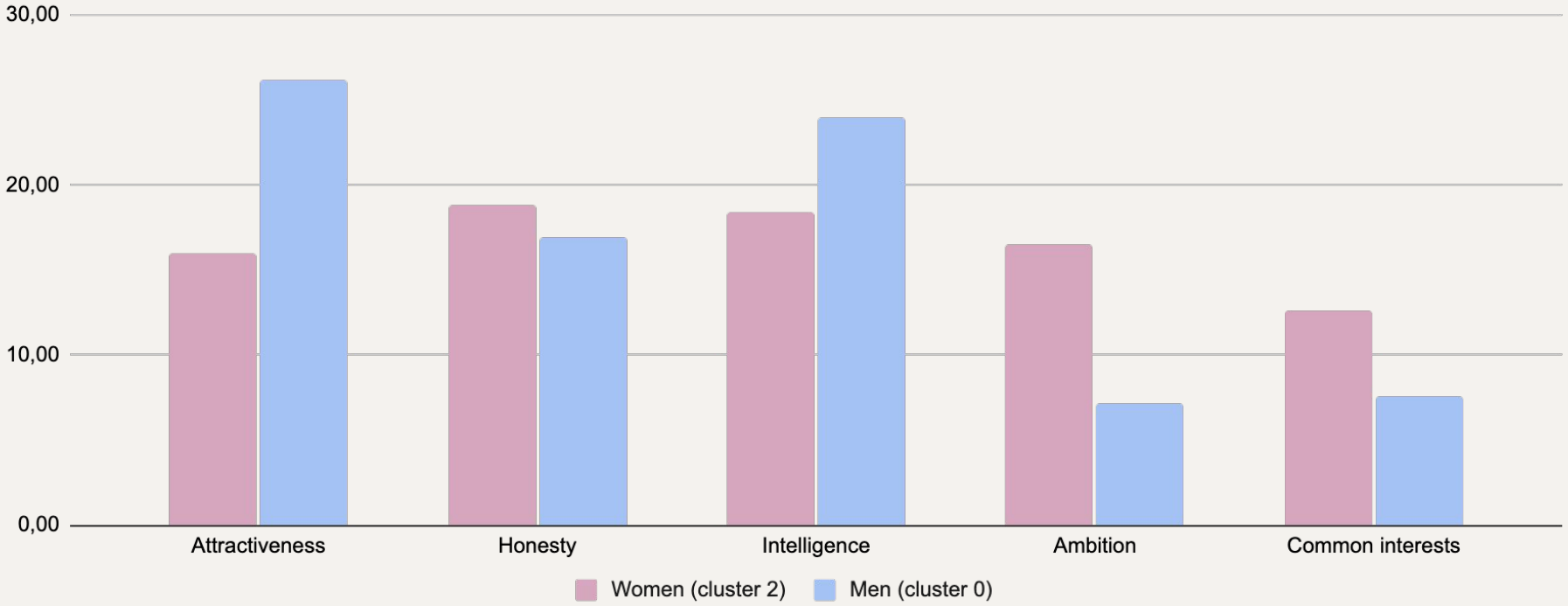
- **2 140**
- 0 111
- 1 18
- 3 5

## Men

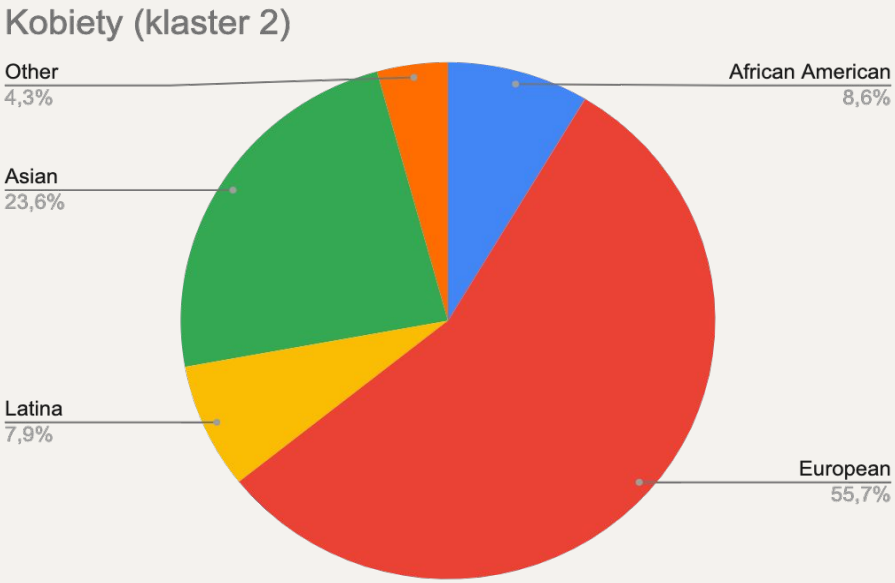
cluster - no. of people

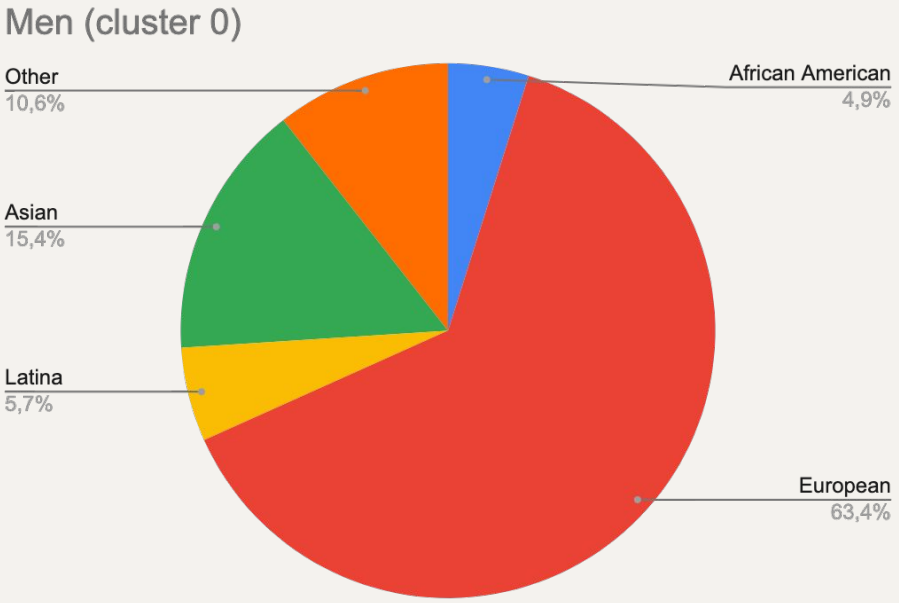
- **0 123**
- 2 93
- 3 32
- 1 29

# Distribution of desired features



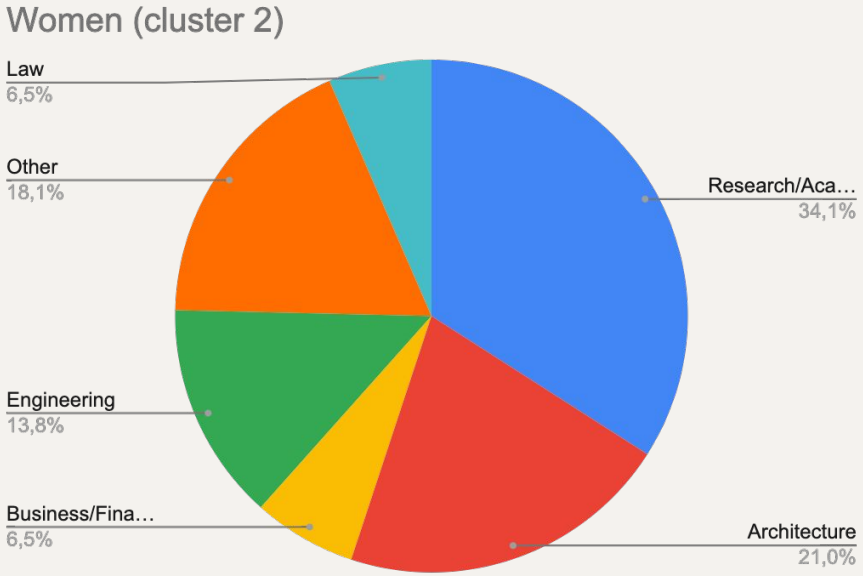
# Ethnic group

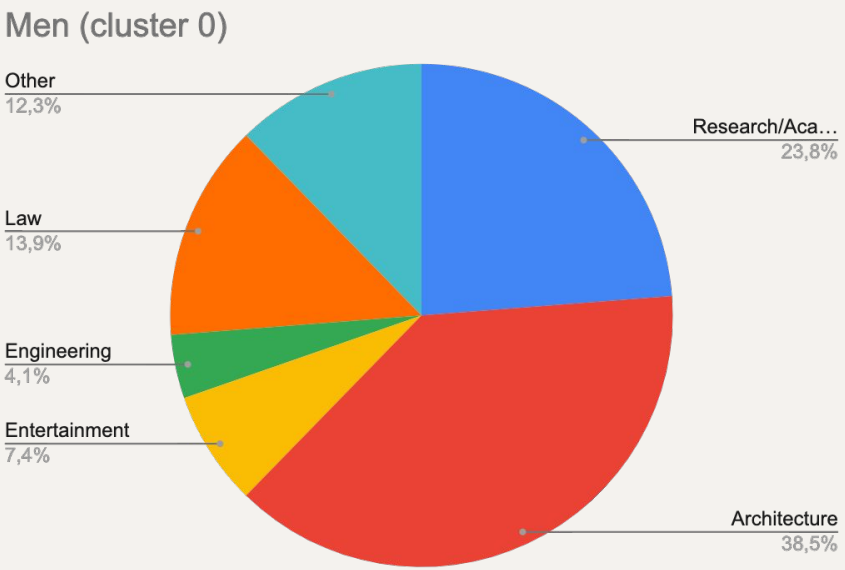


# Zainteresowania

# Obszar zawodowy



# Conclusions and recommendations

- Advertisements should be targeted to the European ethnic group, which can be translated into the geography of the advertisements.
- Common interests are not highly valued (as a desirable feature), so advertisements should not feature couples with common interests.
- Good areas for advertisements include primarily films, but also museums, art, reading, theatre and music.
- The median age for the groups in both sexes is 26.5 and 25 years, respectively. Therefore, the form and language of the advertisement should be age-appropriate.
- Employment area should not be taken into account due to the source of the data