

Memory-based Approaches

- General ideas:
 - X_{ij} : rating of object o_j by user u_i
 - n_i : average rating of all objects by user u_i
 - Normalized ratings: $V_{ij} = X_{ij} - n_i$
 - Prediction of rating of object o_j by user u_a

$$\hat{v}_{aj} = k \sum_{i=1}^m w(a,i) v_{ij} \quad \hat{x}_{aj} = \hat{v}_{aj} + n_a \quad k = 1 / \sum_{i=1}^m w(a,i)$$

- Specific approaches differ in $w(a,i)$ -- the distance/similarity between user u_a and u_i