The Collaboration Filtering Problem

Ratings

Objects: O

Users: U

o_1 o_2 … o_j … o_n

$X_{ij}=f(u_i,o_j)=?$

u_1 3   1.5   …. …   2

u_2

…   2

The task

u_i 1

?

- **Assume known f values for some (u,o)'s**

…

- **Predict f values for other (u,o)'s**

u_m 3

- **Essentially function approximation, like other learning problems**

Unknown function
f: U x O→R