

LRMF (ALS) EXPLAINED – ADVANCED ₃

Algorithm: alternating-least-squares (als)

alternate between recomputing user-factors and item-factors.

Step 1. recomputing all user factors X

$$x_u = (Y^T C^u Y + \lambda I)^{-1} Y^T C^u p(u)$$

where $Y^T C^u Y = Y^T Y + Y^T (C^u - I) Y$

Step 2. recomputing all item factors Y

$$y_i = (X^T C^i X + \lambda I)^{-1} X^T C^i p(i)$$

Step 3. Iterate over **step 1** and **step 2**, till stabilize

SOLUTION

> RANKING