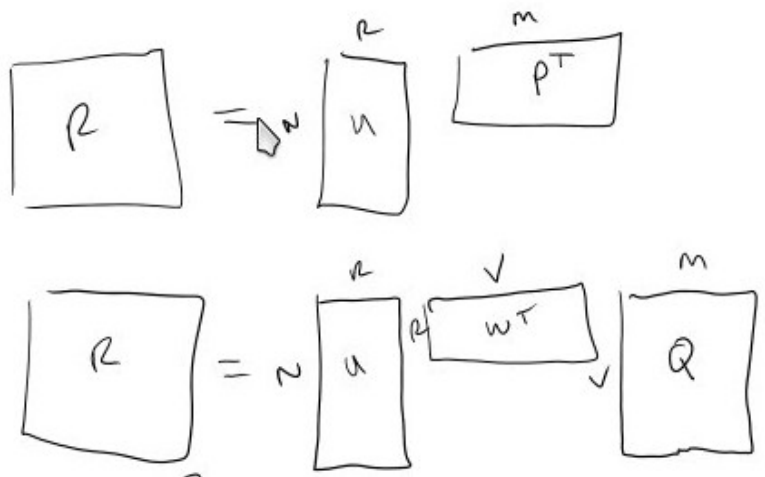


# AT + KM Updates 5/7/15

- Brian derived gradients for our new model
- Aaron reviewing Mat Lab to get ready to code
- Found Mat Lab code for Local Collective Embeddings
- Katy obtaining/ cleaning all Movie Lens data
- Downloaded movie meta data from IMBD
- Processed amazon data into category csv's, removed unknown user
- Organized Amazon data in the data folder of hutch\_research
- Worked on Recommender Systems Wiki



$$\nabla_u = (1-\lambda) (\Omega \circ (R - u p^T)) P + \lambda (\Omega \circ (R - u w^T q)) q^T w$$

$$\nabla_p = \underbrace{\Omega^T}_{m \times n} \cdot \underbrace{(R^T - p u^T)}_{m \times r} \underbrace{u}_{r \times n}$$

$$\nabla_w = \lambda Q \left( \underbrace{\Omega^T}_{m \times r} \cdot \underbrace{(R^T - q^T w u^T)}_{m \times n} \right) u$$

# To Do

- Aaron ~ code up model in Mat Lab
- Katy ~ Prepare data and run baseline models (SVD, SVD++, FunkSVD) in Apache Mahout
- Aaron ~ make word count matrices for Movie Lens and Amazon movie descriptions