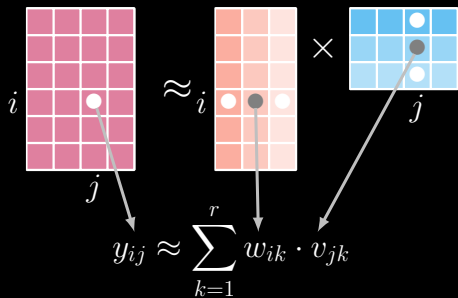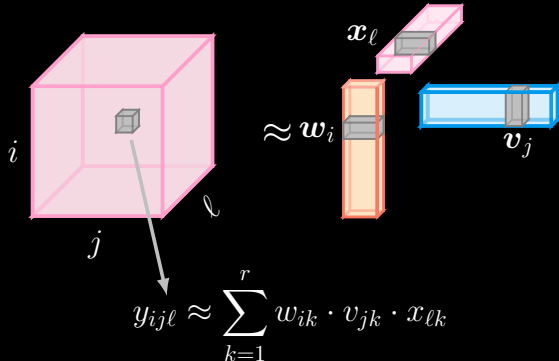# Intuitive Understanding of Tensor Factorization Formula

Estimating rank-r factor matrices from a matrix/tensor

① Matrix Factorization

② Tensor Factorization

$$y_{ij} \approx \sum_{k=1}^{r} w_{ik} \cdot v_{jk}$$

$$y_{ij\ell} \approx \sum_{k=1}^{r} w_{ik} \cdot v_{jk} \cdot x_{\ell k}$$

Thanks for your attention!

Any Questions?

About me:

- 🏠 Homepage: https://xinychen.github.io
- 🐙 GitHub: https://github.com/xinychen
- ✉ How to reach me: chenxy346@gmail.com