

Identifying heterogenous brain regions

Model: RDPG (Random Dot Product Graph)

- We know brain regions i and j will be connected with probability p_{ij}

- Think: an unfair coin

- We don't know the true value of p_{ij}

- Assume: all brain regions have a latent position in some d -dimensional space

- That is, the i -th brain region is associated with a vector $x_i \in \mathbb{R}^d$

• Then, $p_{ij} = x_i \cdot x_j$

- Great! But how we calculate x_i ?

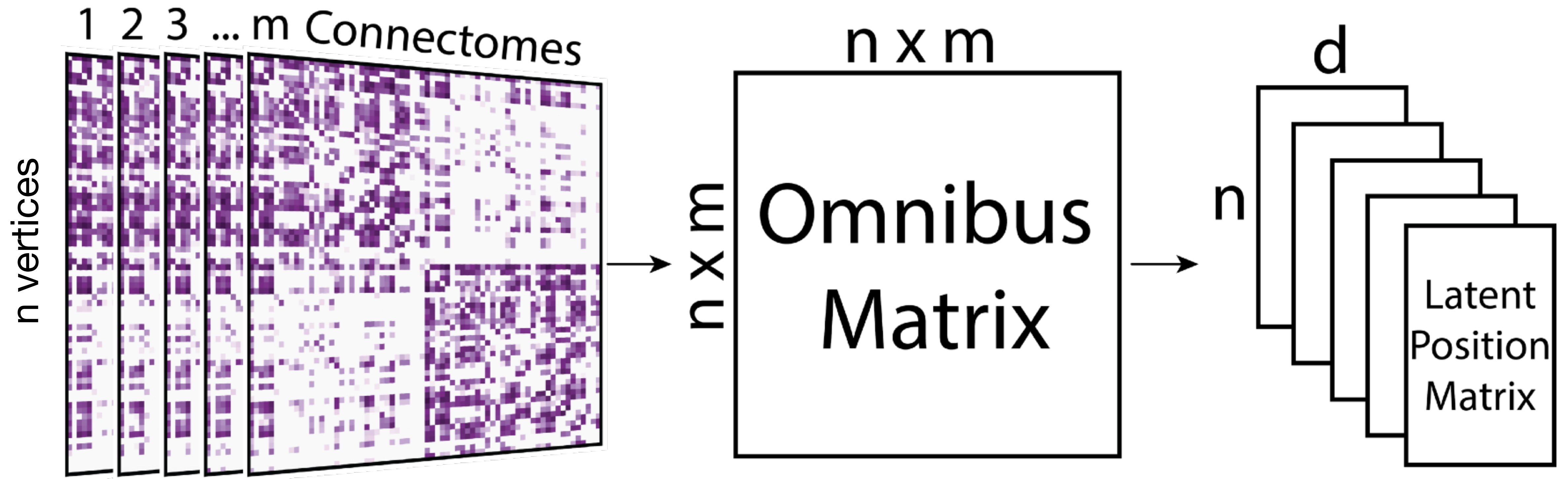
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Estimate latent positions with joint graph embedding

[Athreya et al., \(JMLR\) 2018](#)