



Universität
Zürich^{UZH}

Department of Informatics
Dynamic and Distributed Systems Group

D-RDW – Diversity-Driven Random Walks

Random Walks for News Recommender Systems

Runze Li, Lucien Heitz, Oana Inel, Abraham Bernstein

23 September 2025



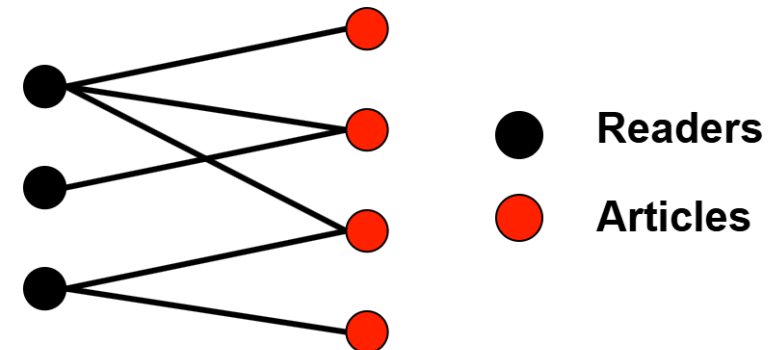
Diversity-Driven Random Walks

- Incorporate norms and values
- Extendable and customizable
- Diversification with random walks
- Light-weight and domain-agnostic

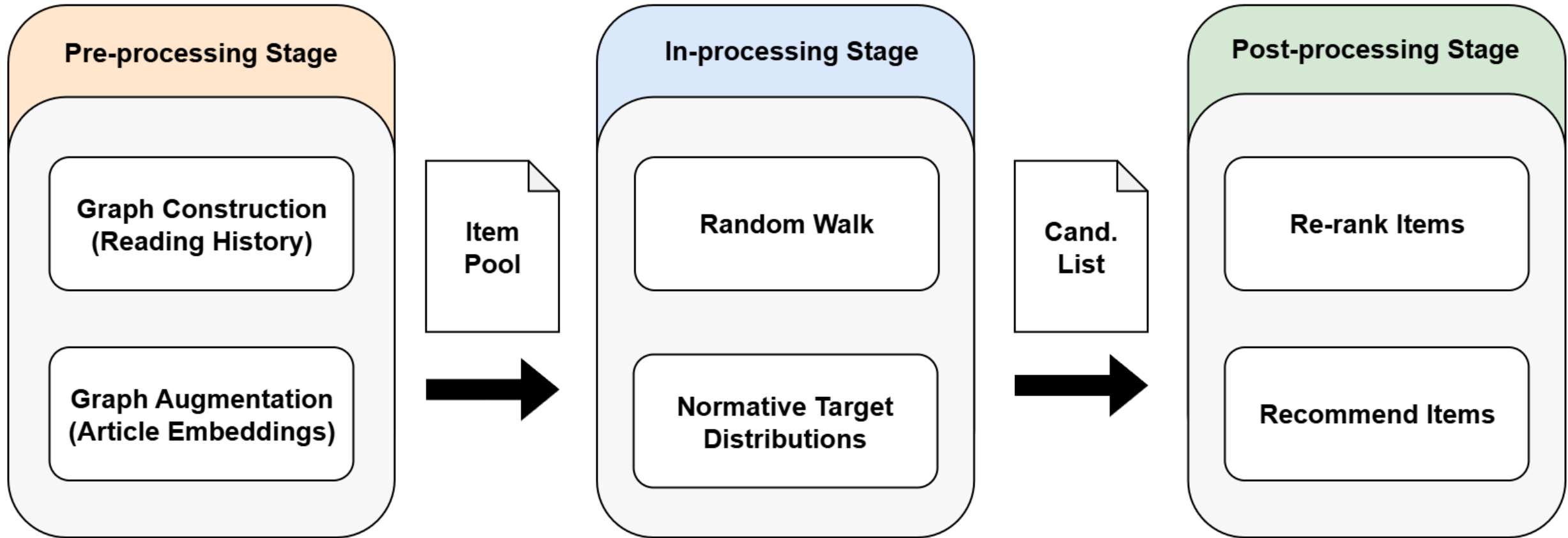
Normative Target Distribution



Reading History



D-RDW Pipeline



Evaluation and Results

(Top 20, EB-NeRD Small)

Metric	D-RDW	RP3 β	LSTUR	NRMS
Calibration (Category, \downarrow)	0.407	0.415	0.433	0.509
Fragmentation (Party, \downarrow)	0.394	0.582	0.610	0.632
Gini (Party, \downarrow)	0.250	0.856	0.874	0.880
ILD (Party, \uparrow)	0.789	0.392	0.343	0.326
Compute Cost (RP3 β = Base)	4x	1x	110x	100x

D-RDW: Diversity-Driven Random Walks

- Incorporate norms and values
- Excellent item diversification
- Light-weight & cost-efficient
- Stay tuned for more...

Paper, code, and more:



informfully.ch/recsys-25.html