

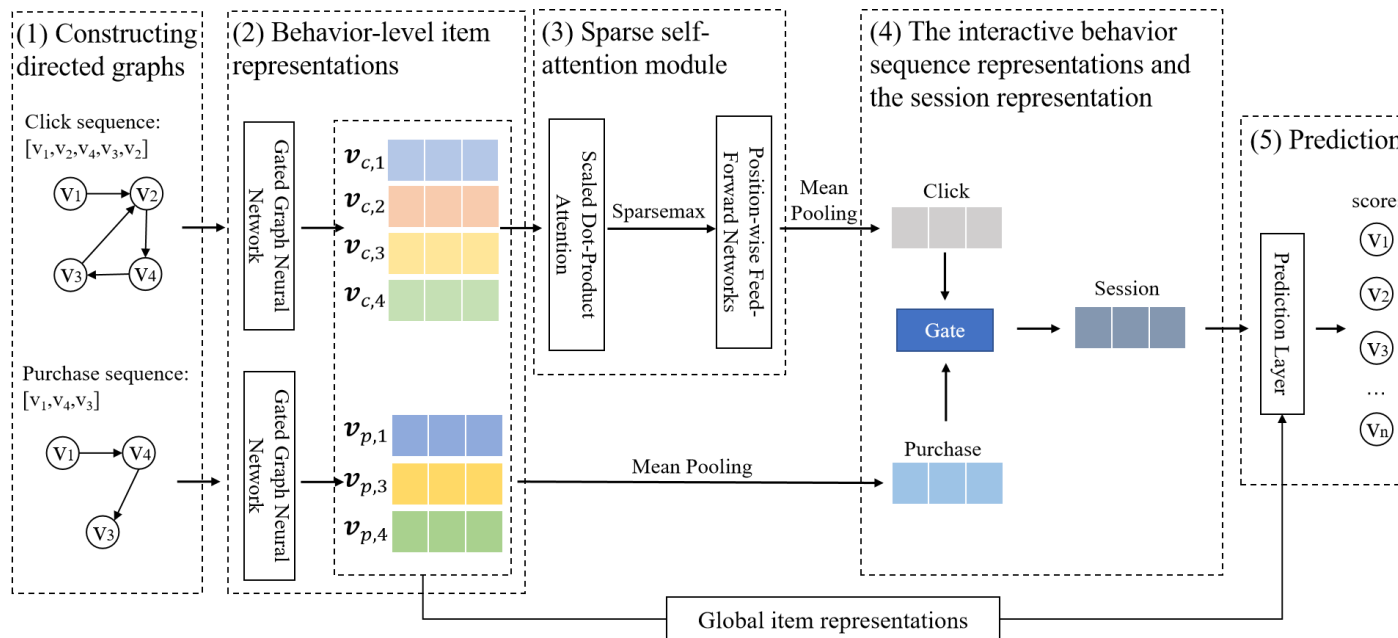
BA-GNN: Behavior-aware graph neural network for session-based recommendation

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Problems & Ideas

- Problems of session-based recommendation:
 - Various types of interactive actions have different effects on recommendation.
 - Noise is widely existed in historical interactive data.
- Ideas: We propose a behavior-aware graph neural network for session-based recommendation, BA-GNN.



The overall framework of BA-GNN.

Main Contributions

- Contributions:
 - We propose a behavior-aware graph neural network for session-based recommendation.
 - The experimental results on two public datasets show that our proposed method achieves the best performance.

Methods	Yoochoose			REES46(Cosmetics)		
	H@100	M@100	N@100	H@100	M@100	N@100
POP	6.0950	0.2529	1.2231	17.8013	2.2265	5.0135
Item-KNN	15.2860	1.9415	4.4040	20.6950	2.3011	5.7206
GRU4Rec	19.1140	2.5292	5.5830	24.7119	2.7627	6.7571
NARM	18.7750	2.5819	5.5813	25.1056	2.7782	6.8263
STAMP	20.3610	2.3487	5.6879	23.3025	2.5899	6.3133
SR-GNN	21.2620	2.6892	6.1232	24.8550	2.7372	6.7573
GC-SAN	19.7180	2.5218	5.6861	24.9783	2.3933	6.5303
MGNN-SPred	27.9200	3.5058	8.0442	29.9960	3.6662	8.4361
BA-GNN	29.0510	4.4517	9.0820	31.4380	4.0046	9.0115
Improve	4.05%	26.98%	12.90%	4.81%	9.23%	6.82%

Experimental results of all methods.