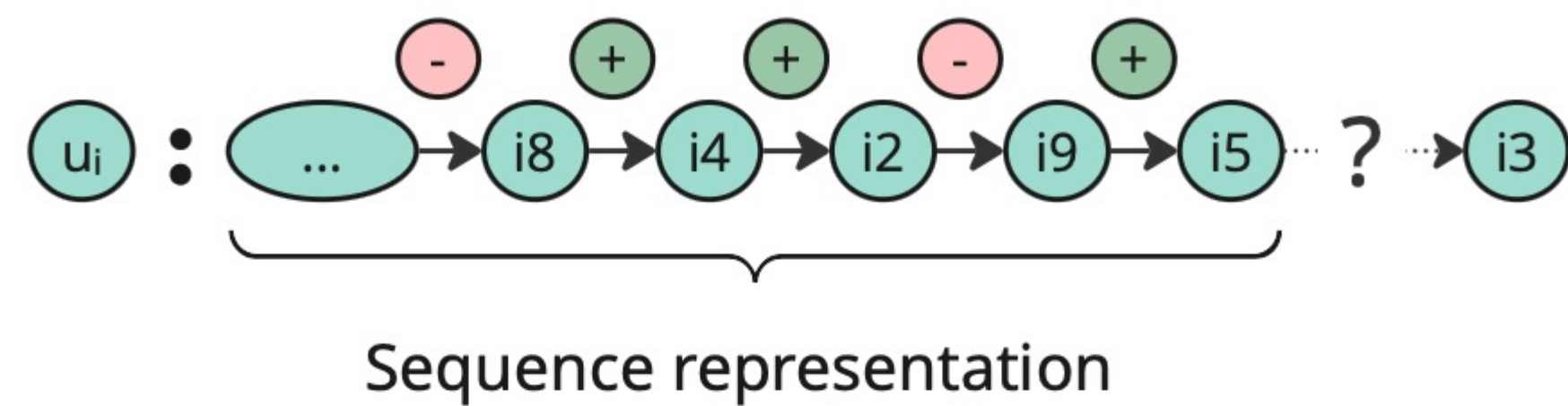


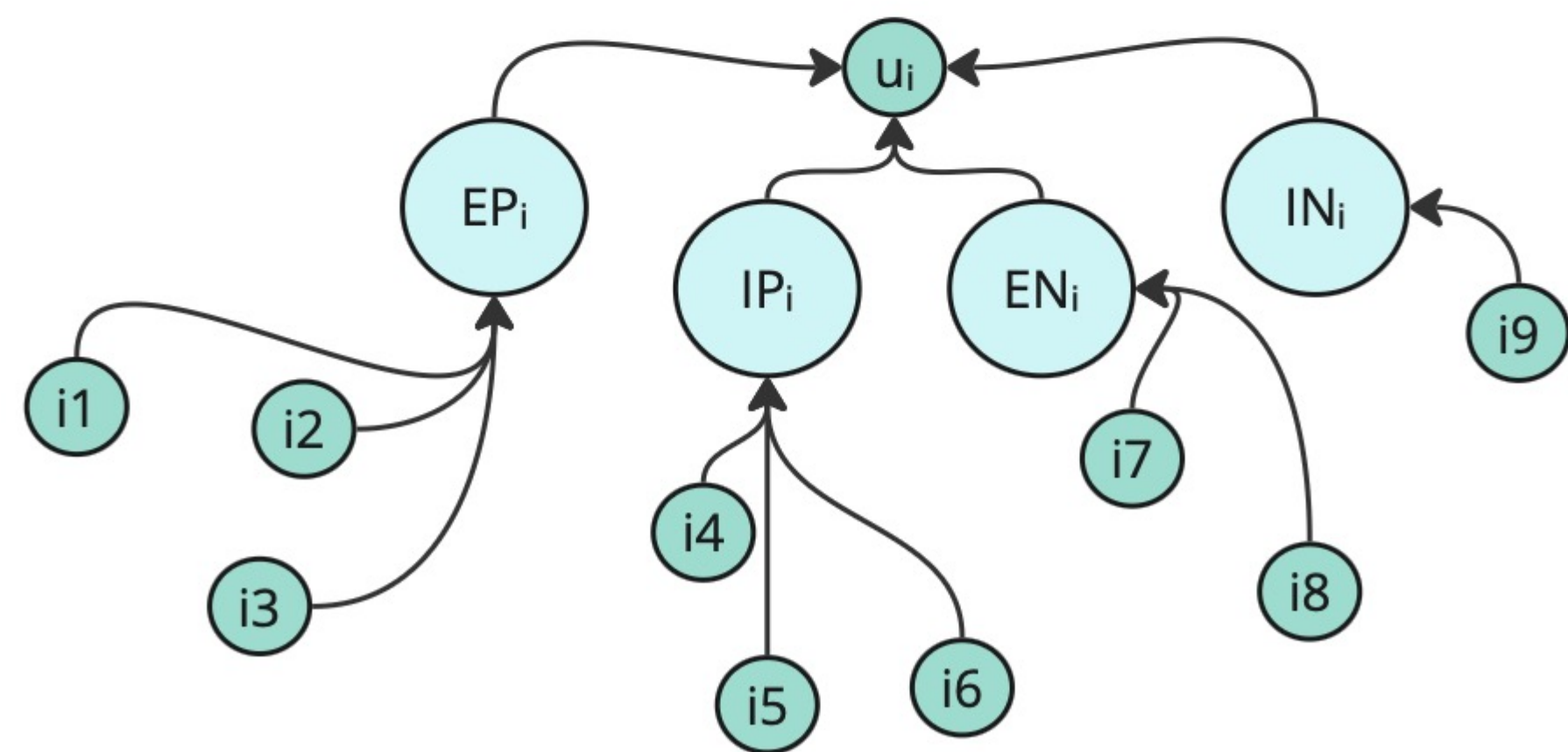
### Sequence Encoder (THPTransformer)



Hawkes-inspired Transformer

Sequence representation

### Interaction Graph (HeteroData)



GAT/SAGE conv

Updated user embeddings after MP

+

Unified User Representation

Preference Scoring

updated  $u_i$  ×  $i_{14}$

Item embeddings storage