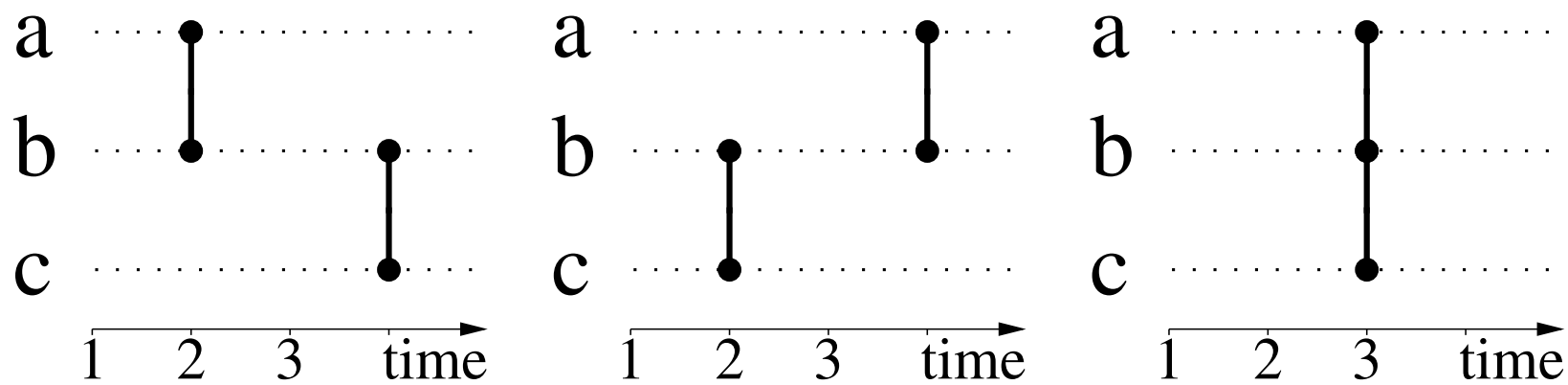
What is Tiphaine working on? 🤔

DIG mini-seminar, December 9th

Stream isomorphisms

with Florian Yger

$R \cong S$: reordering that preserves adj and non-adj

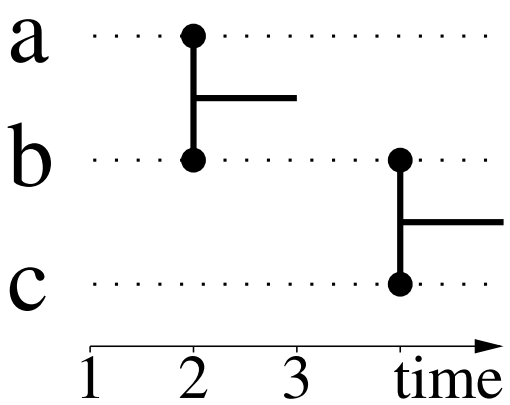


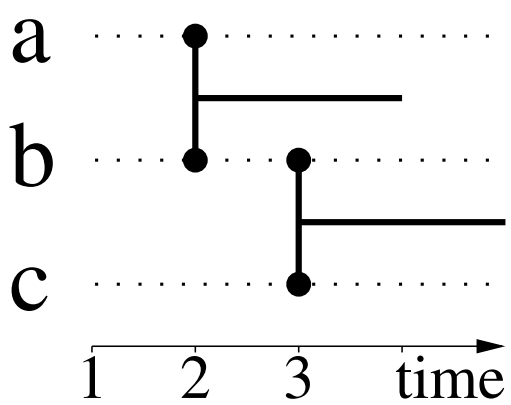
Idea: Transform into a static, "time-directed" graph

	A	**B**	**C**
A	✓	✓	×
B	✓	✓	×
C	×	×	✓

Stream isomorphisms

What if we have durations?





How to represent?

Time-node matrix? Bipartite graph?

Algorithms (McKay et al., 2014; Redmond et al., 2016)

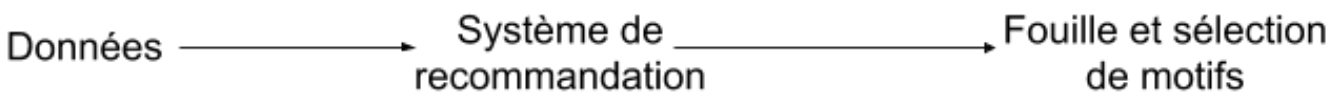
Can we have a Weisfeiler-Lehman for streams?

Pattern mining for recommendation explanation

PRIM with Ryan Moussouni and Anne-Claire Maréchal

Goal: mine the local graph around recommendations to provide explanations

$\rightarrow$ using FCA on attributed graphs



Do we (really) have to enumerate? How to avoid stars? How to select relevant elements?

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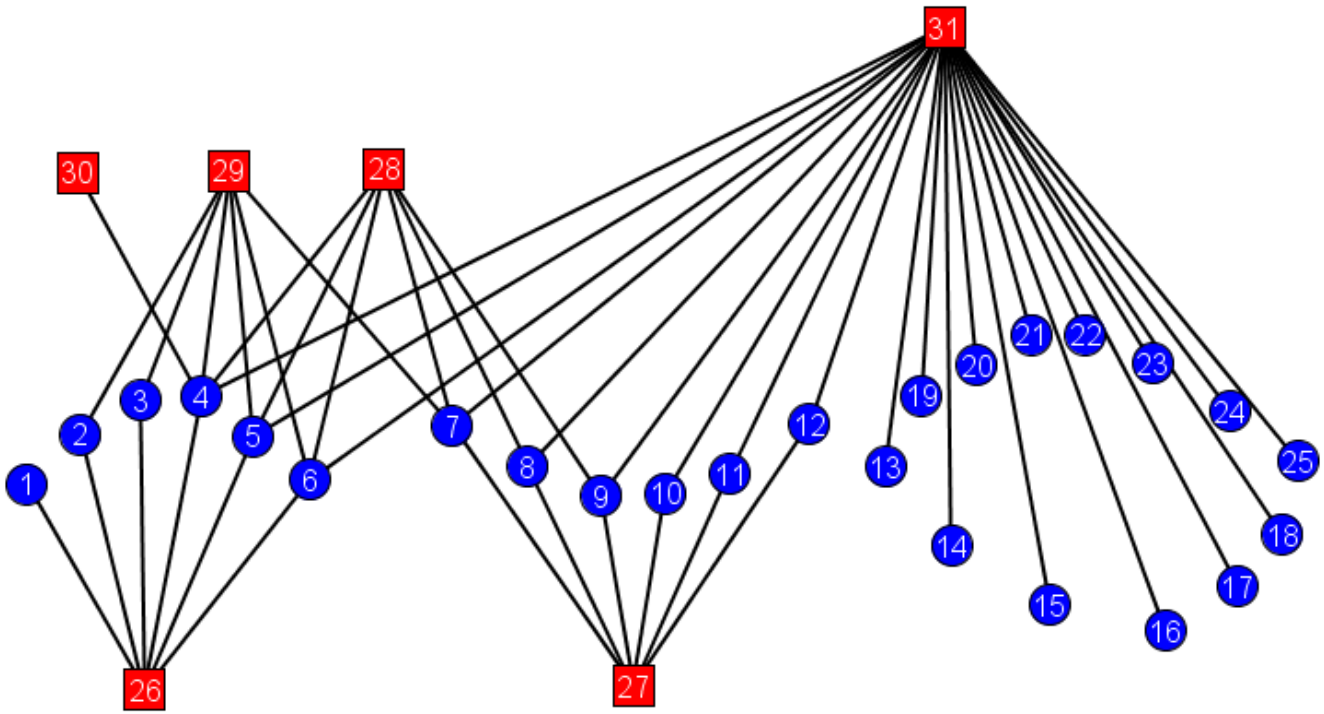

Do we (really) have to enumerate? How to avoid stars? How to select relevant elements?

Some other projects

- Transparent AI + graphs (ANR proposal)
- Fraud detection in bank data (with i3)
- Stream graphs and graph signal processing (with LIP6)
- `scikit-network`
- Telecom x Onepoint common lab