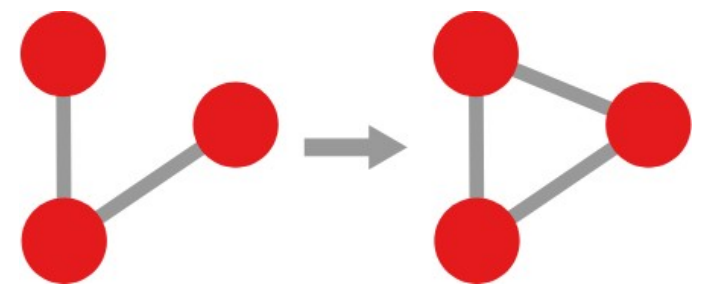


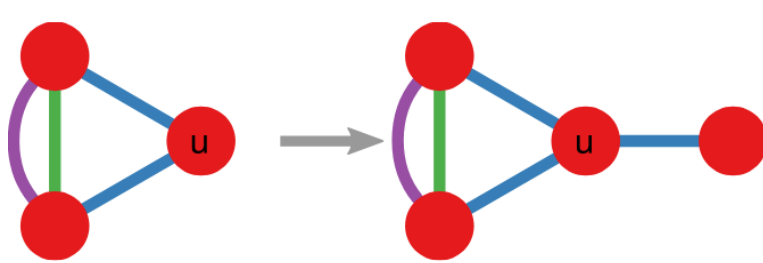
Multiplex Graph Association Rules for Link Prediction

1



A graph association rule uses frequent patterns found in your network to infer rules about how the network will evolve.

2



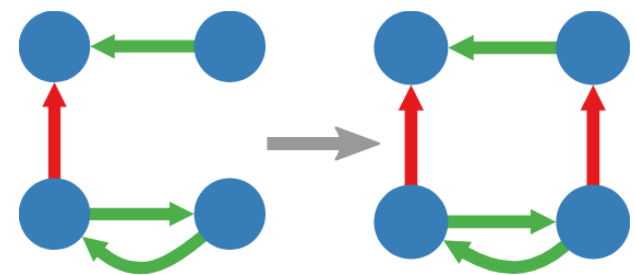
In multiplex networks it allows you to predict the link type, and to predict when the new link comes with a new node.

3

Method	Aarhus	Physicians	CElegans	Pardus
MAGMA	0.909	0.904	0.957	0.719
Sharma	0.800	0.738	0.504	0.506
Pujari	0.866	0.694	0.815	OOM
Jalili	0.892	0.823	0.689	OOM
Hristova	0.806	0.655	0.596	OOM
De Bacco	0.869	0.820	0.867	OOM
Ensemble Base	0.921	0.933	0.933	OOM
Ensemble Over	0.933	0.951	0.966	OOM

The method favorably compares to the state of the art of multiplex link prediction

4



And it can, e.g., expand social balance from triangles to patterns of 4 nodes.