Dynamic Graph Embedding for Fault Detection

Haitao Zhao

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Highlights

- This manuscript proposes a novel method, called Dynamic Graph Embedding (DGE), for fault detection.
- DGE adopts augmented matrices instead of extended vectors for feature extraction.
- DGE incorporates both time information and nearest neighborhood information to form similarities of different process data.
- DGE is designed to obtain embedding features with Markov chain analysis of the similarities.
- Extensive experimental results show the superiority of DGE in terms of missed detection rate (MDR) and false alarm rate (FAR).