



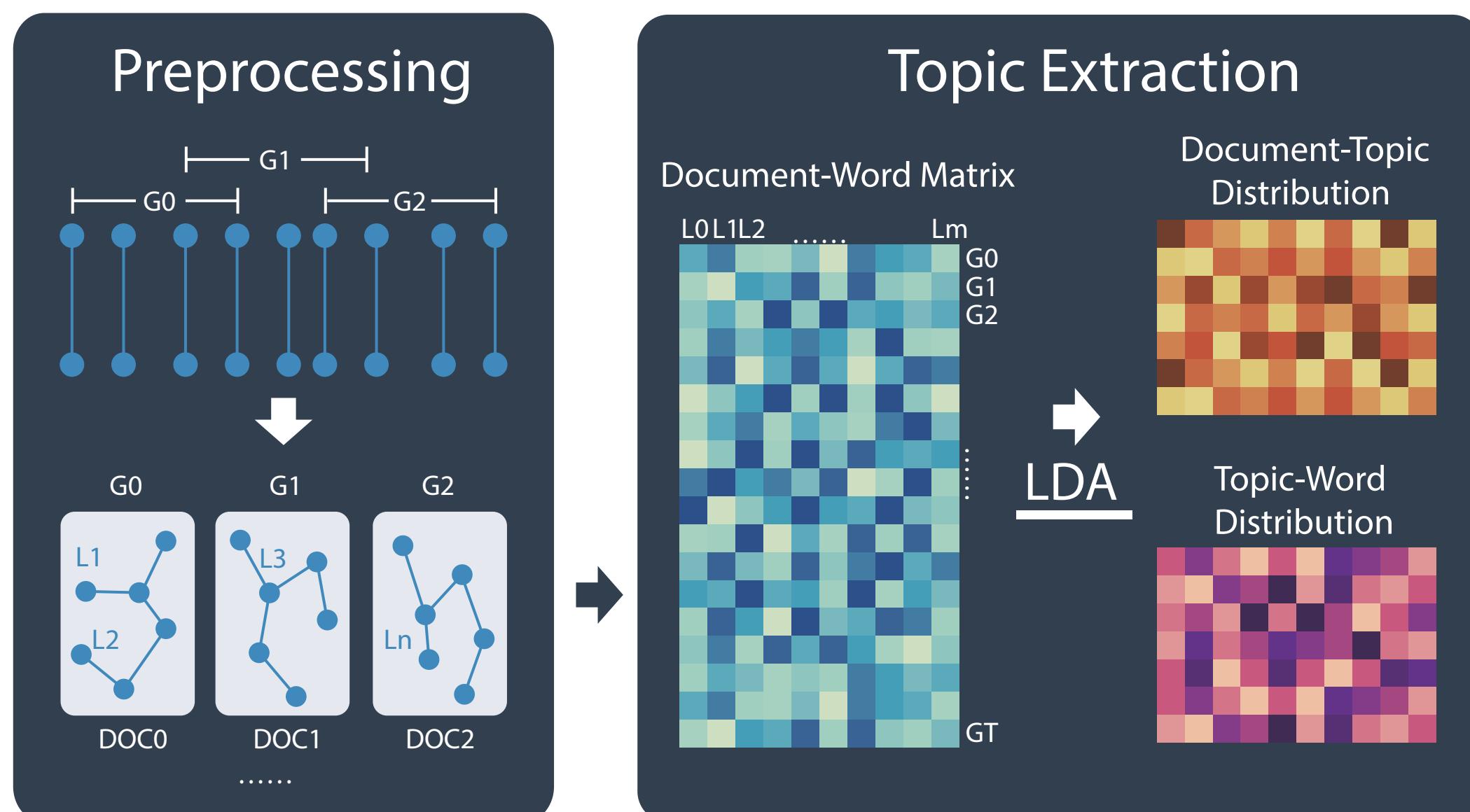
# GraphLDA: Latent Dirichlet Allocation-based Visual Exploration of Dynamic Graphs

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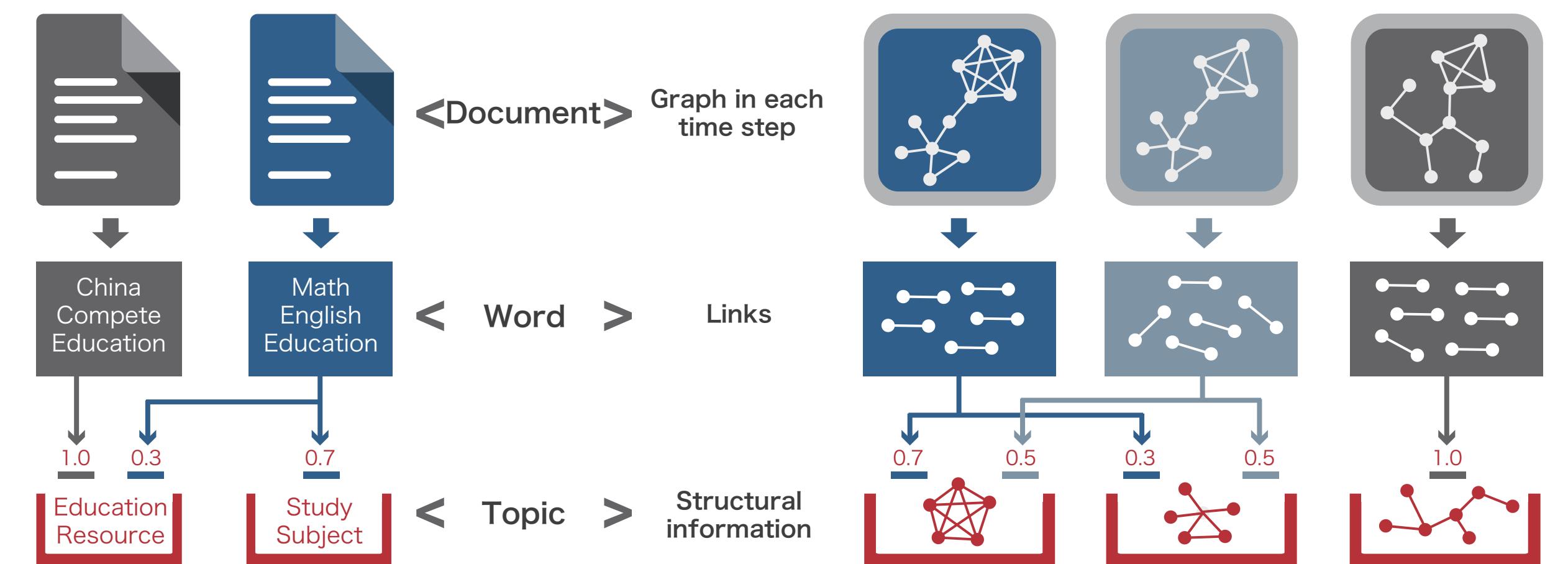
## INTRODUCTION

We propose a latent Dirichlet allocation (LDA)-based visual exploration method for dynamic graphs. With the LDA-based analysis, we can reveal hidden structures in the dynamic graph based on the extracted semantic topics. To gain a deeper understanding of the derived structures and their evolution, we design a visual analytics system with an analytical pipeline enabling users to explore the dynamic graph. A new visual interface supports users to iteratively explore and interpret the LDA results based on the salience in the derived structures.

## PIPELINE



## GRAPHLDA



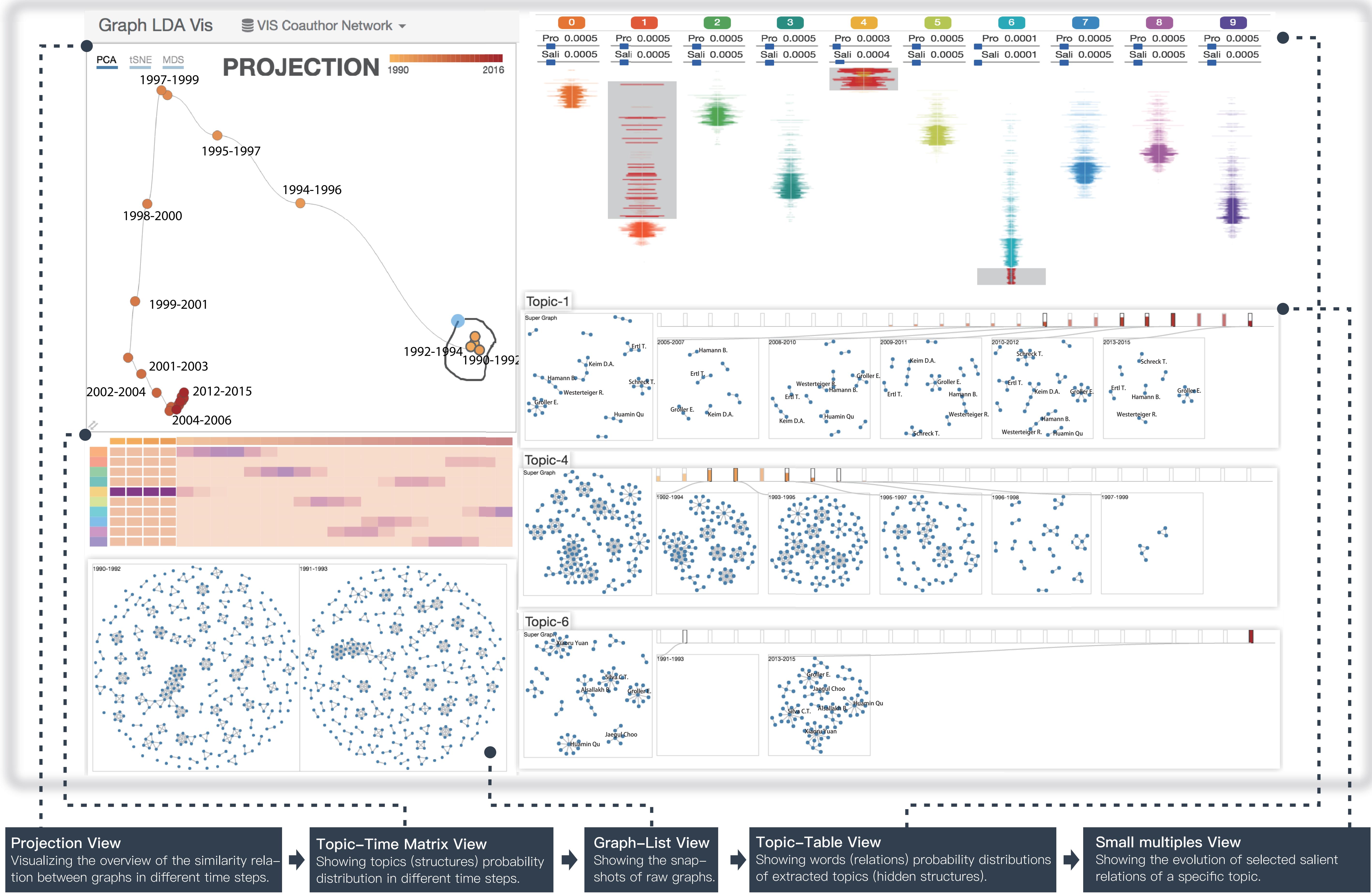
**Preprocessing:** The raw dynamic graphs data are preprocessed to be the input matrix of LDA.

**Topic Extraction:** With the input of the document word matrix, the LDA would output two parts of results – the document-topic distribution and topic-word distribution.

**Visual Exploration:** Visual system supports users to iteratively explore the LDA results from overview to details within a visual analytics loop.

## CO-AUTHOR NETWORK EXPLORATION

**Data** Papers published in IEEE VIS from 1990 to 2015. Nodes (4813) are authors; links (14033) are cooperations.



## ACKNOWLEDGEMENTS

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## CONTACT