

Summary & Future Directions

KDD 2020 Tutorial

Embedding-Driven Multi-Dimensional Topic Mining and Text Analysis

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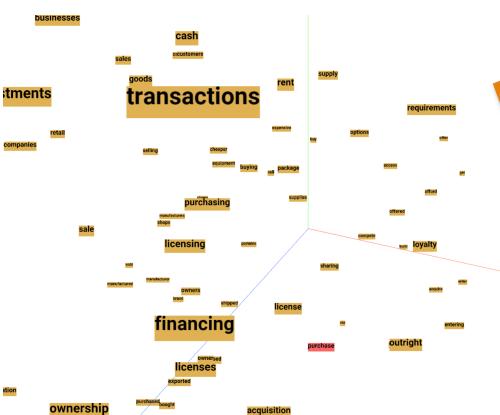
August 23, 2020

Our Roadmap of This Tutorial

Text Corpus



Part I: Text Embedding



Part II: Taxonomy Construction

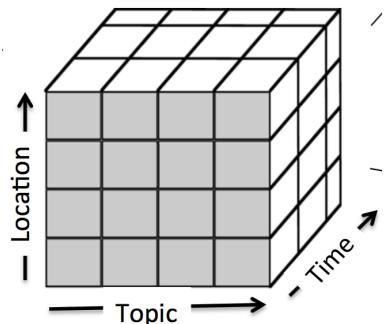


Part III: User-Guided Topic Mining

Existing KB



Part IV: Multi-Dimensional Text Analysis

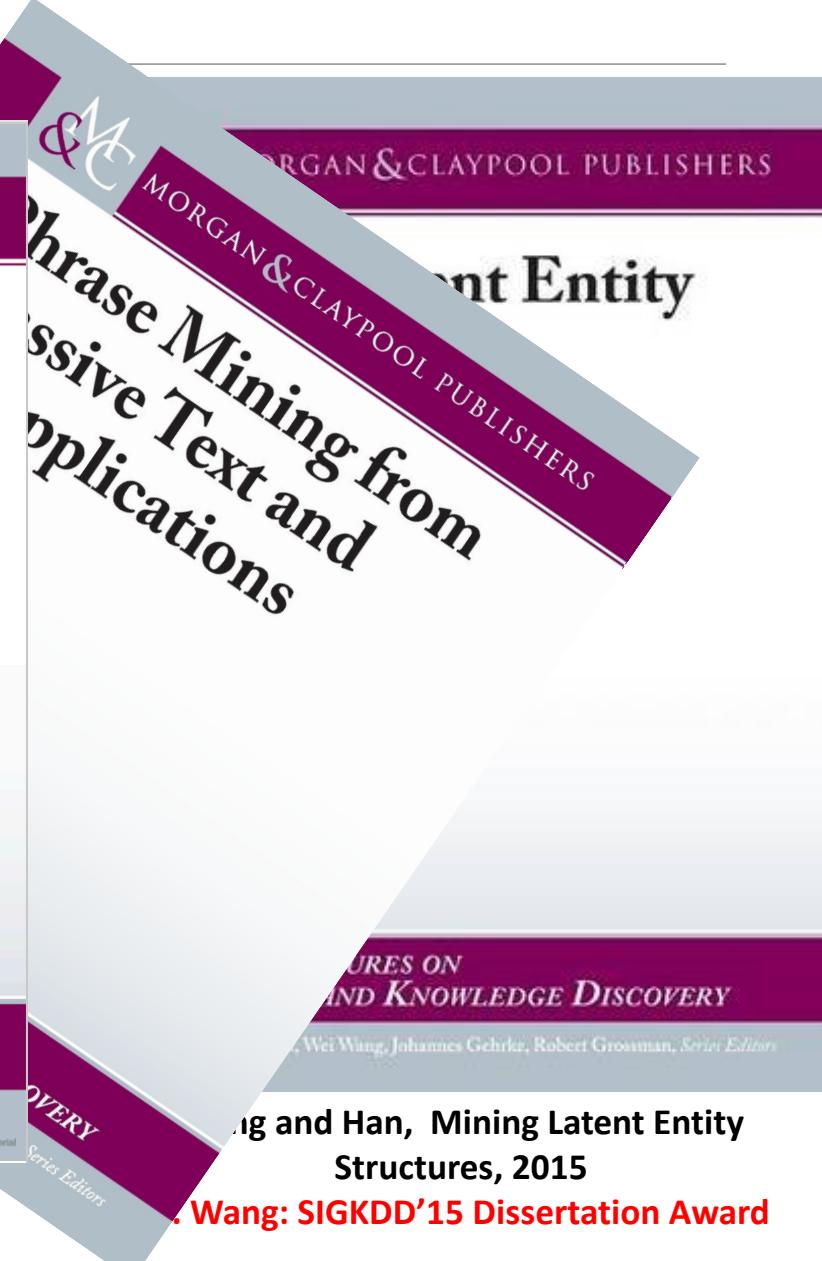
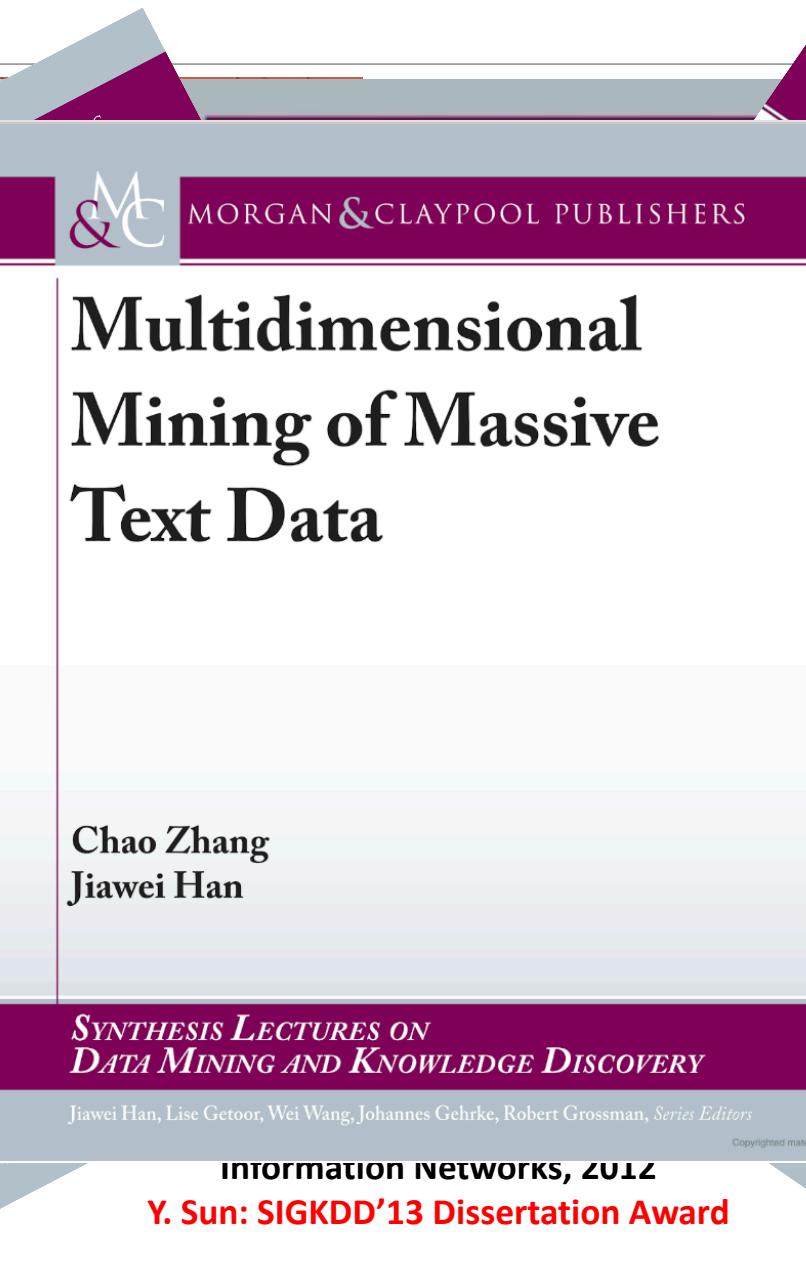
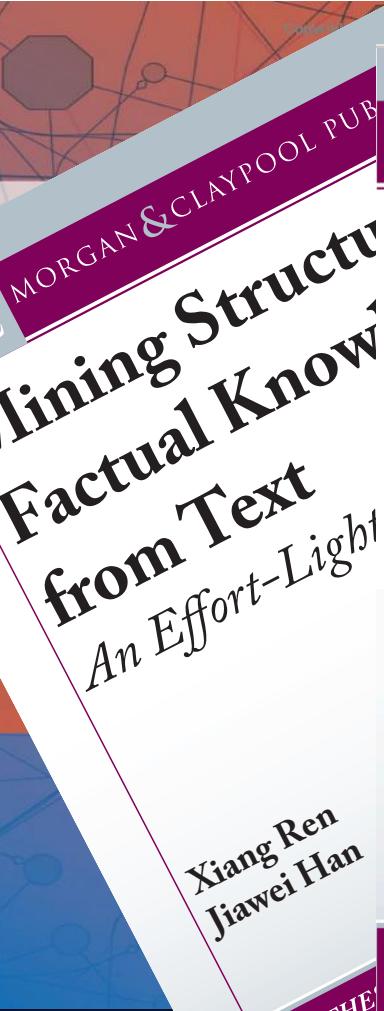
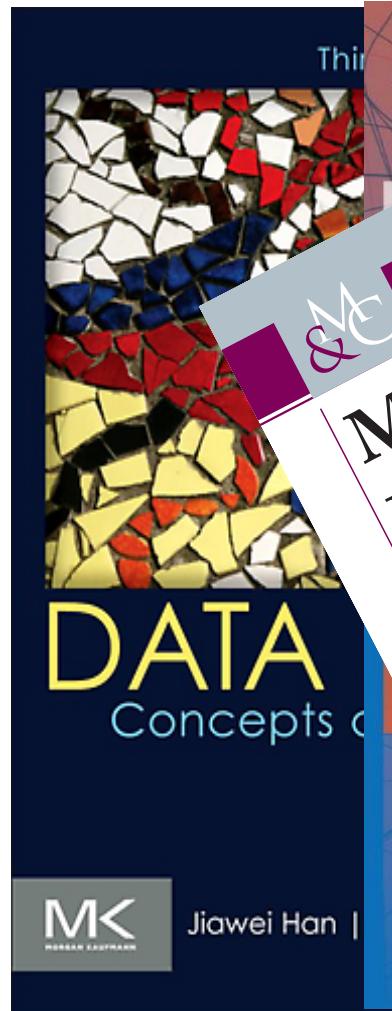


Knowledge

Summary: from Unstructured Text to Knowledge

- Power of Embedding at Transforming Unstructured Text into Structured Knowledge
- Mining Structures from Massive Unstructured Text (Texts → Structures)
 - Automated Text Representation Learning
 - Automated Multi-Faceted Taxonomy Construction
 - Automated Topic Mining
 - Automated Document Assignment in Multidimensional Text Cube
 - Automated Comparative Summarization in Multidimensional Text Cube
- Still a lot of work to do from unstructured text to structured knowledge

Our Journey: From Big Data to Big Structures & Knowledge

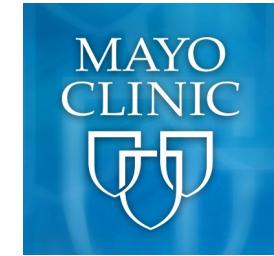
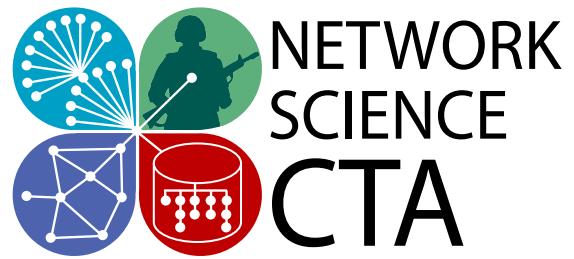


Y. Sun: SIGKDD'13 Dissertation Award

W. Wang: SIGKDD'15 Dissertation Award

Acknowledgement

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A high-resolution satellite image of Earth's surface, showing a mix of blue oceans, white and grey clouds, and green and brown landmasses. The image covers a wide area, including parts of North America, South America, and Africa.

Thank you !
Q&A