

Mining Data in Social Media

HU Meiqun

School of Information Systems

Singapore Management University

My Education Background

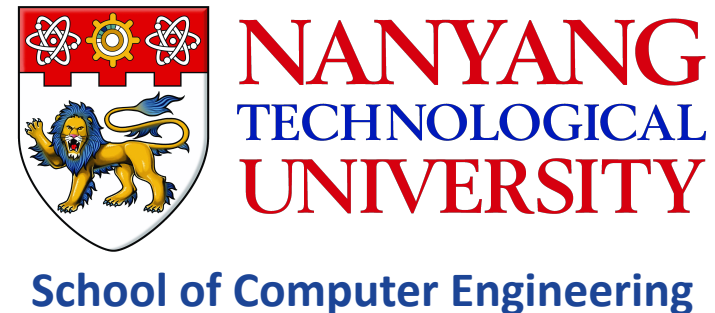
Ph.D in Information Systems

- Dissertation: *Predictive Modeling for Navigating Social Media*
- Jun 2008 – Mar 2012,
Singapore Management University
- Aug 2006 – Jun 2008,
Nanyang Technological University

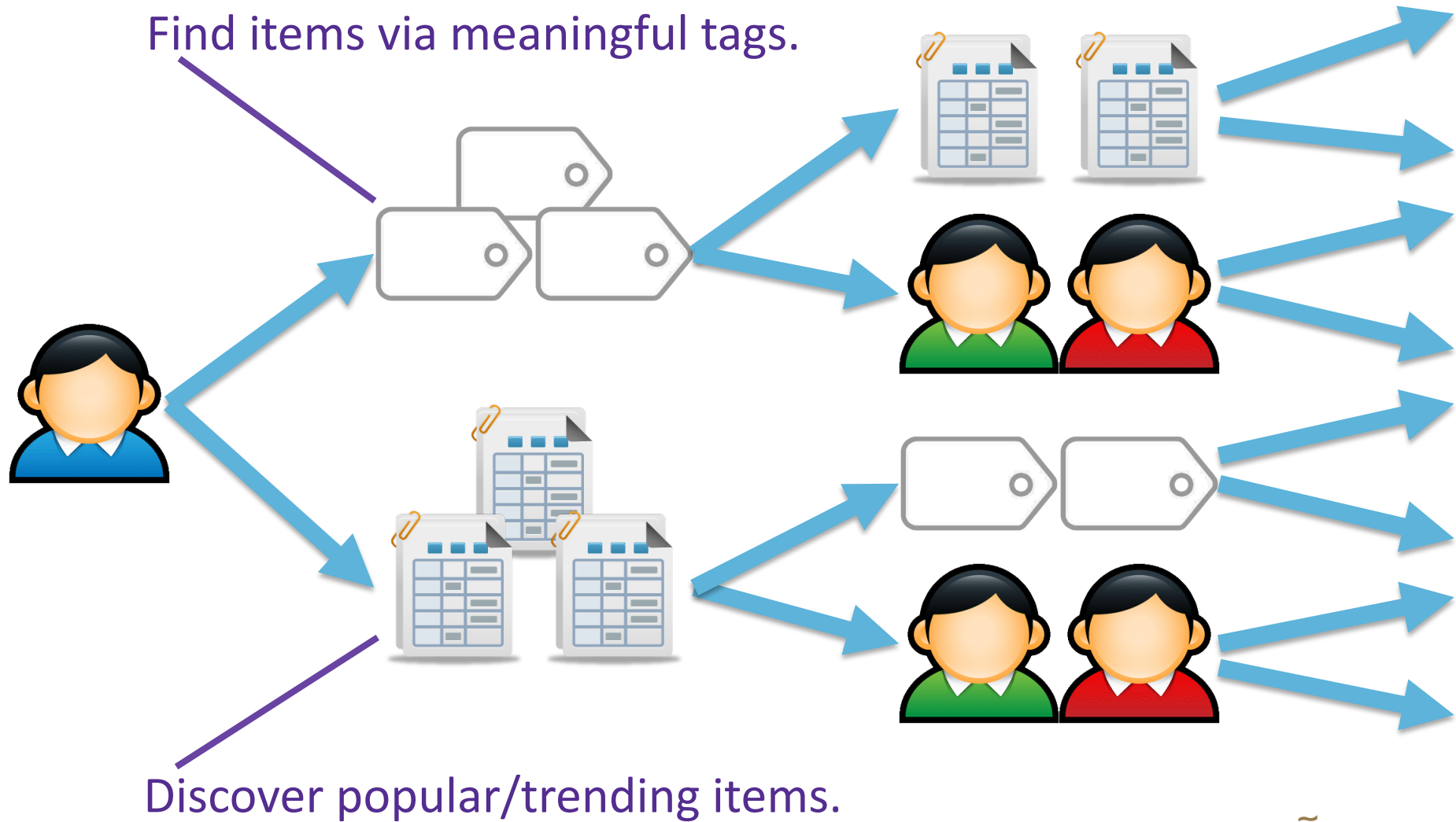


B.Eng in Computer Engineering

- Jul 2002 – Jul 2006,
Nanyang Technological University



My Dissertation Research



My Projects and Experiences

BBC Mobile
NEWS

CNN

USA TODAY

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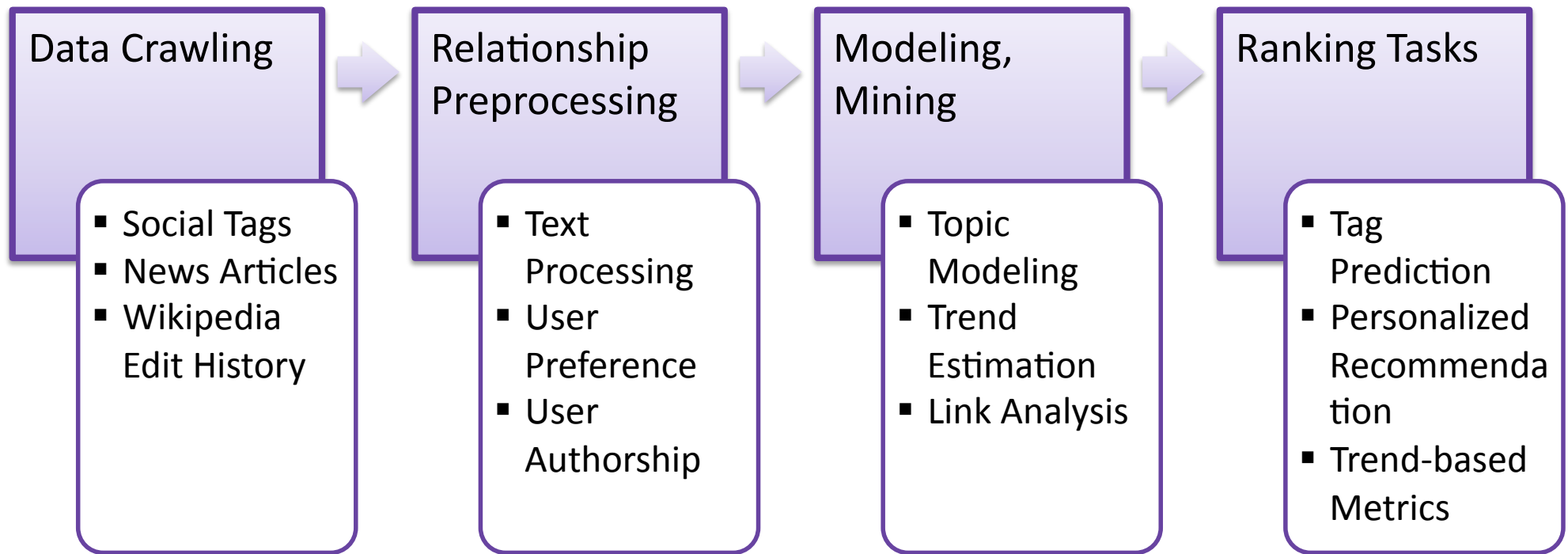
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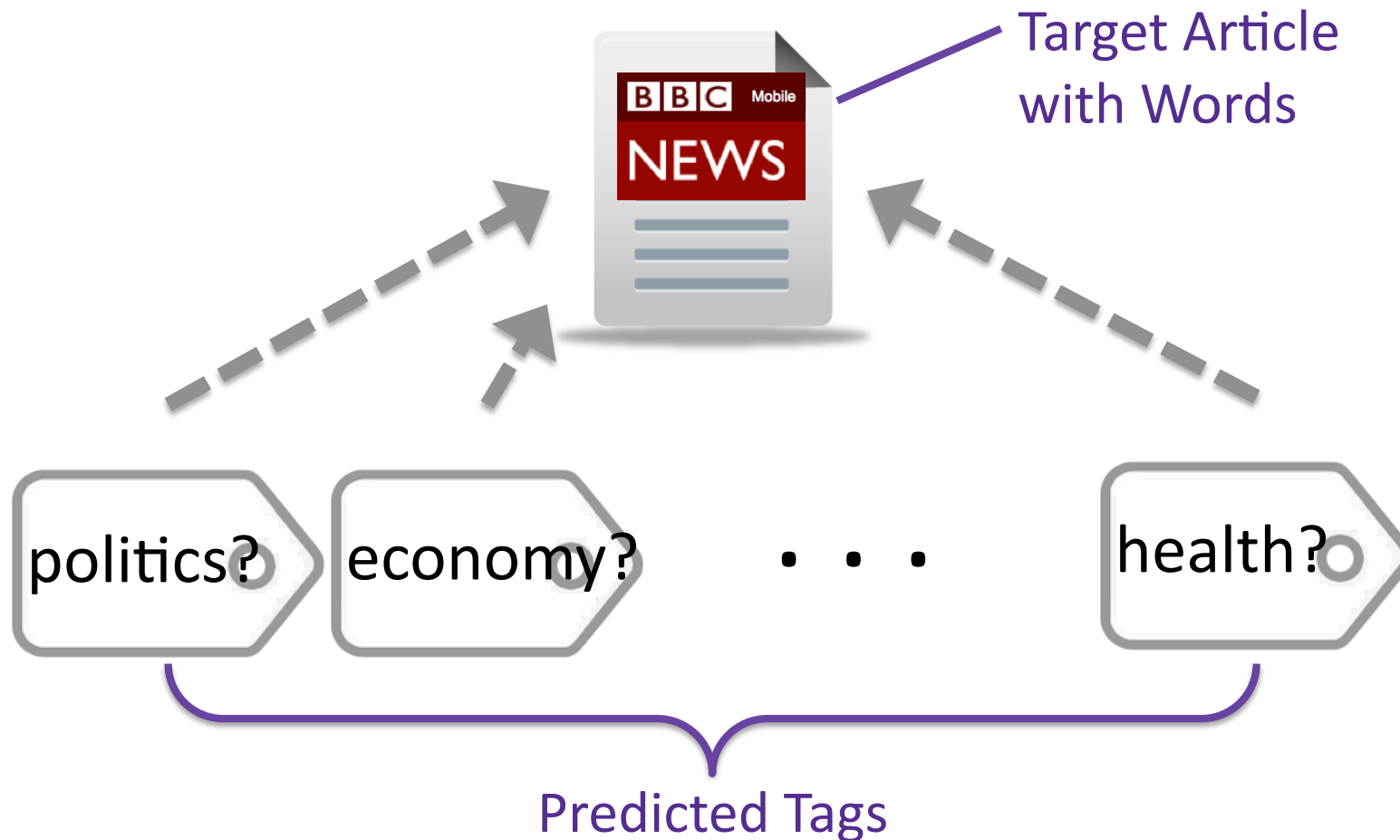
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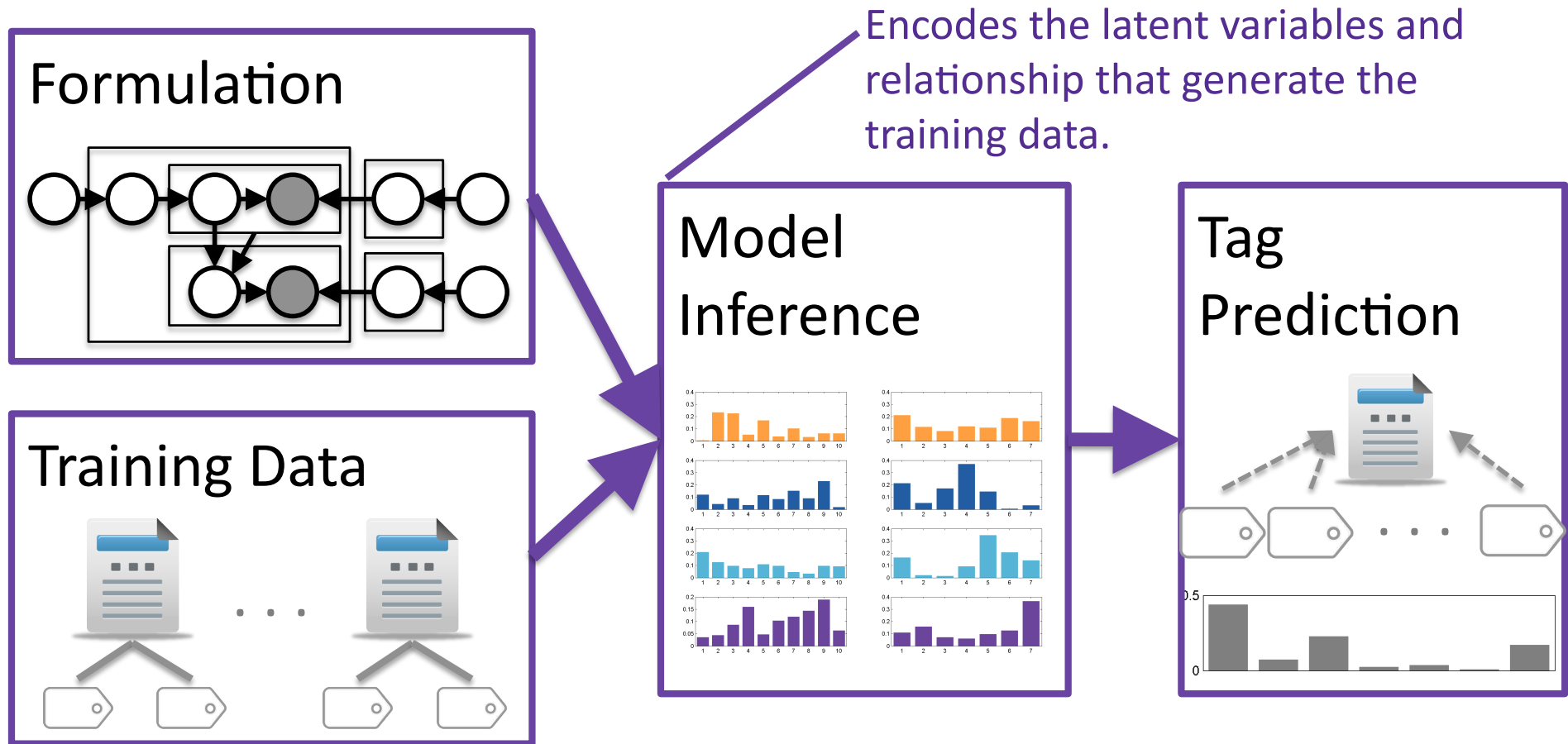
My Research Methodology Overview



Tag Prediction: Task Definition



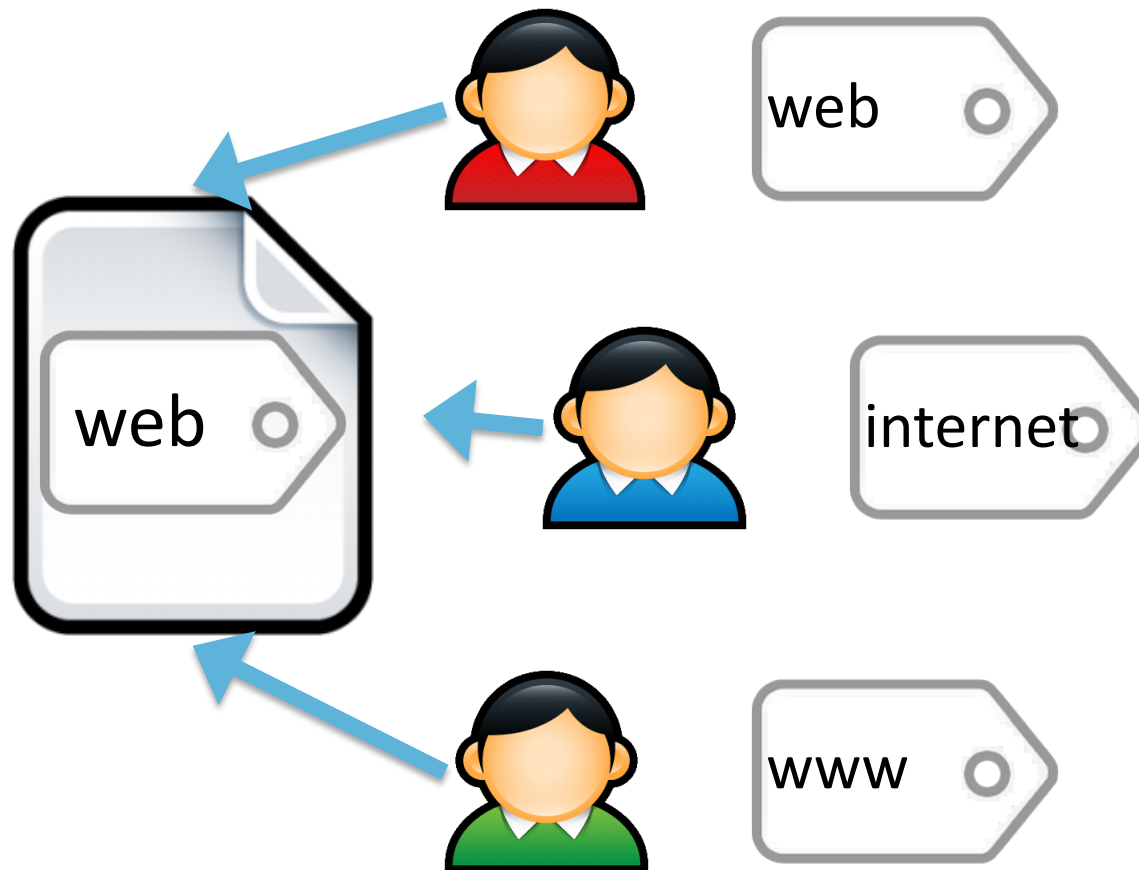
Tag Prediction: Solution Overview



Key Contributions:

- Model **topics of tags, topics of words** and how they **relate**.

Personalized Tag Recommendation: Task Definition

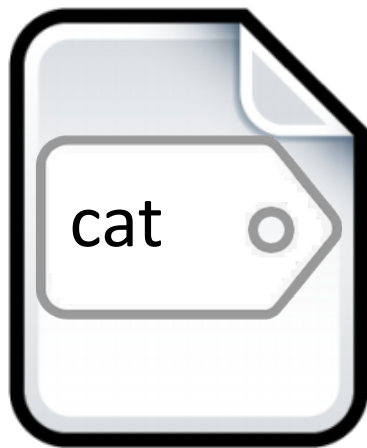


Personalized Tag Recommendation: Intuition and Challenges

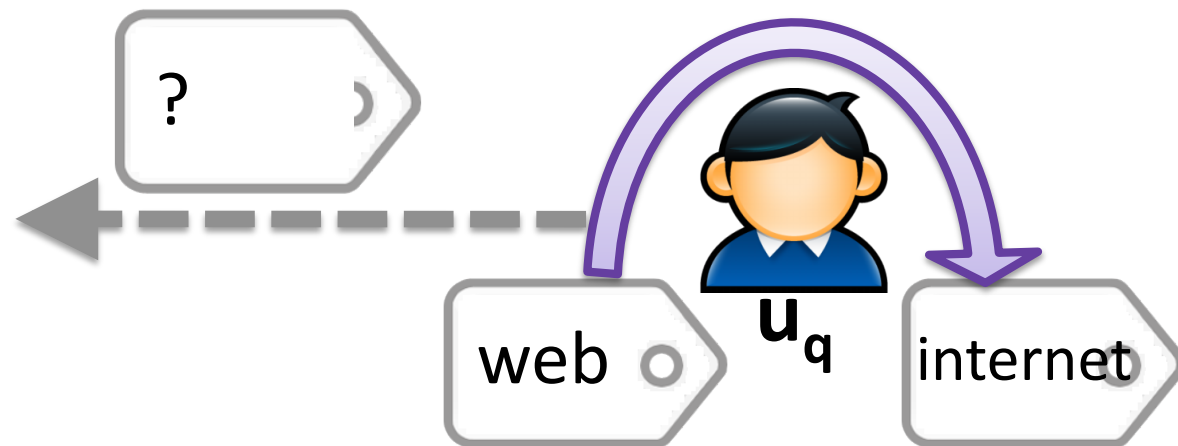
$$P(\text{ ? } \mid \text{ resource tag , } u_q)$$

Tagging Preference Pattern

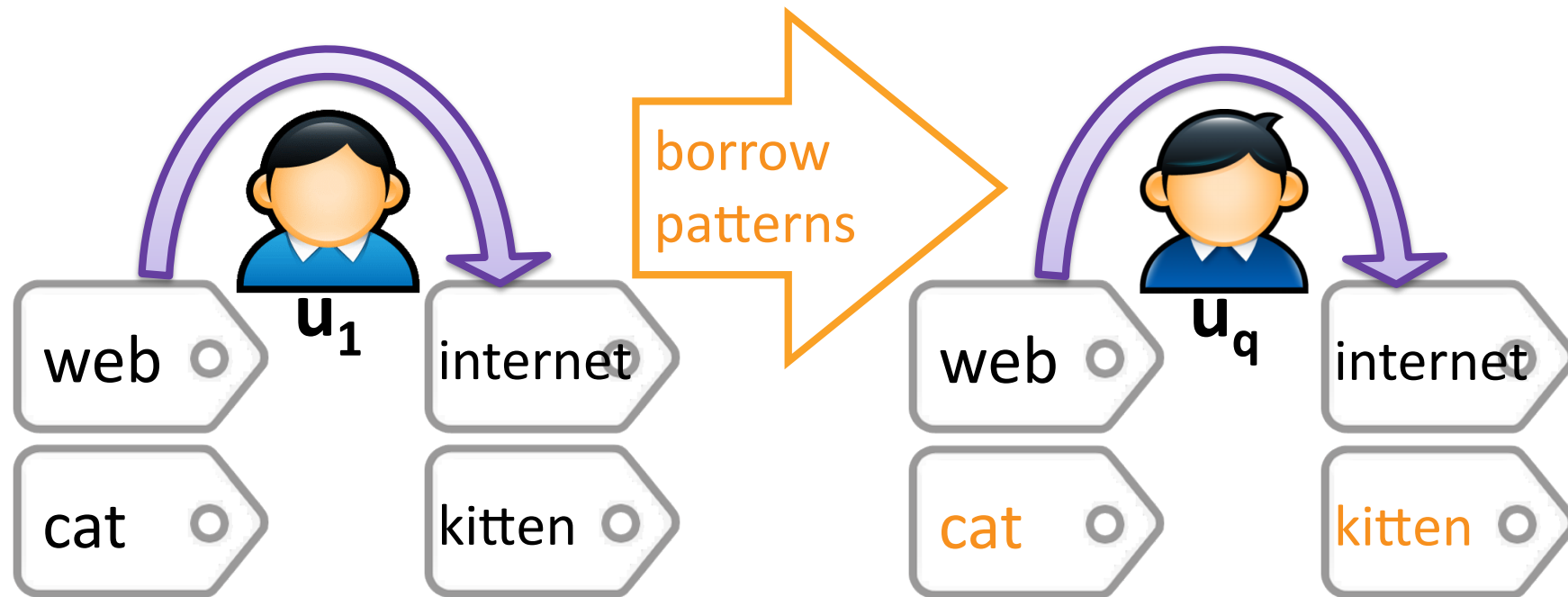
Target Resource



Target User



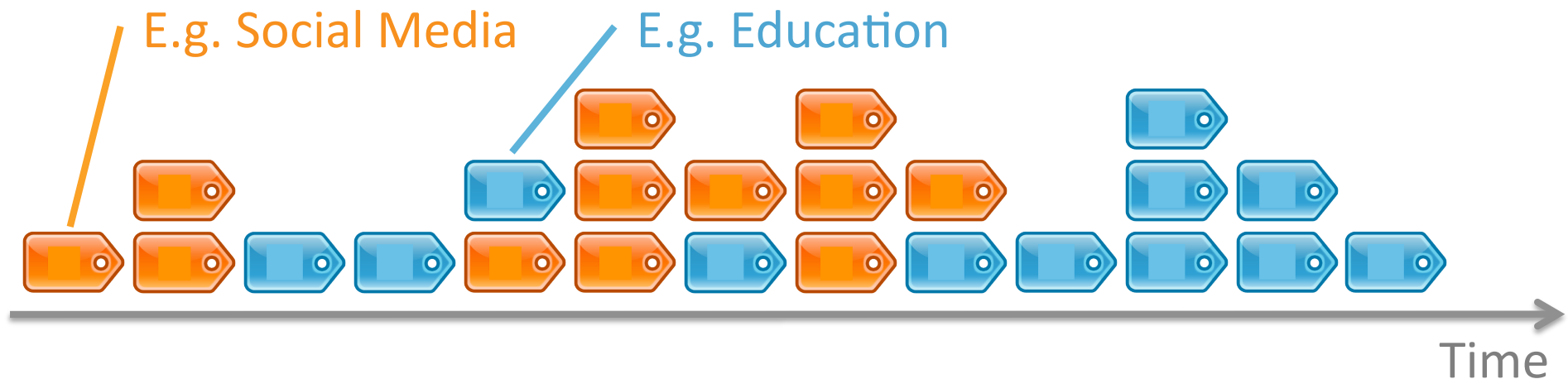
Personalized Tag Recommendation: Solution Overview



Key Contributions:

- Model **tagging preference patterns** of users.
- Find **like-minded users** to borrow preference patterns.

Trend Discovery using Social Annotations: Intuitions



- How to capture emerging trends from these temporal profiles of social annotations?
- How to use trends to perform resource ranking tasks?

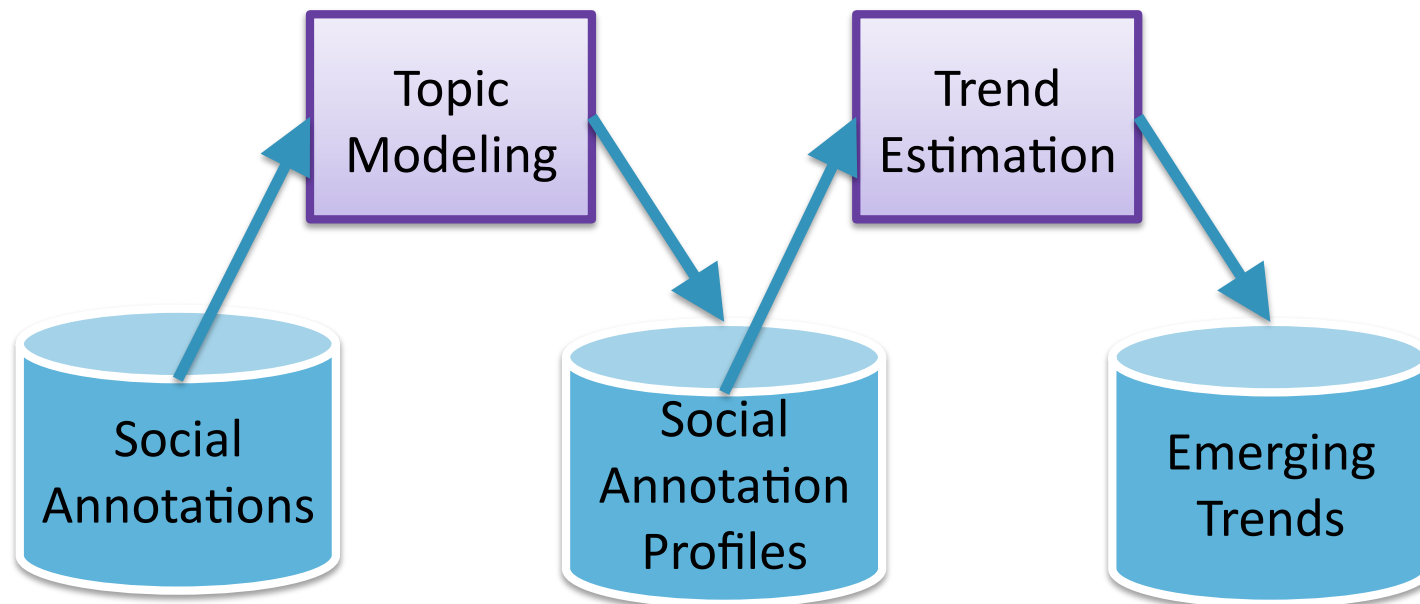
Trend Discovery using Social Annotations: Solution Overview

1. Topic Modeling:

To analyze the **multiple aspects of interest** in the annotation content.

2. Trend Estimation:

To parameterize the **characteristics of emerging trends**.



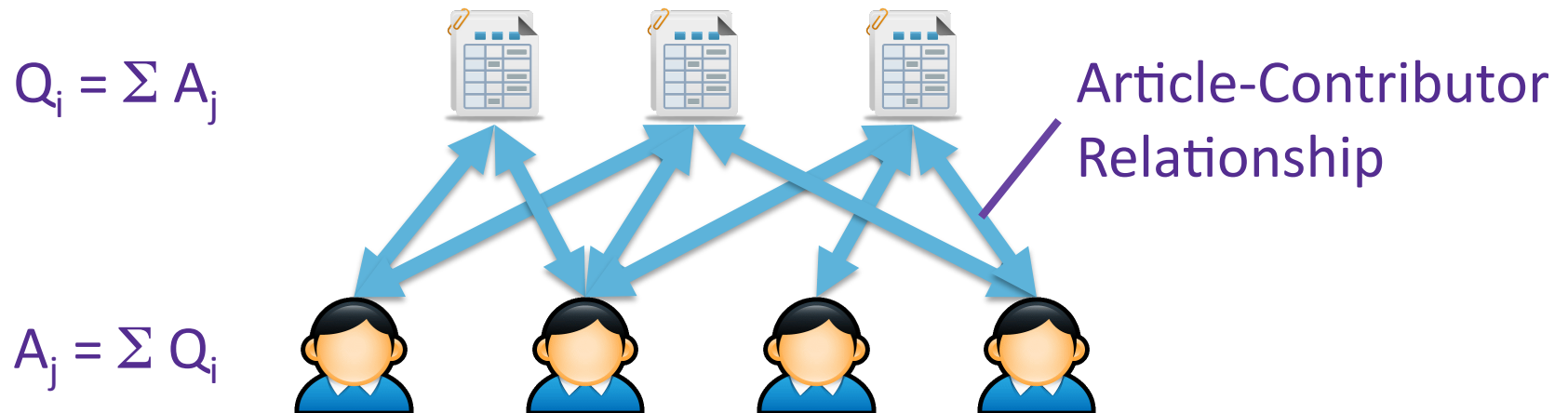
Quality Assessment of Wikipedia: Motivations



- How to assess the quality of millions of articles without interpreting the content?

Quality Assessment in Wikipedia: Intuitions

Good authors write good articles;
Good articles are written by good authors.



Key Contributions:

- Formulate the **mutual dependency** between the **quality** of articles and the **authority** of contributors.

My Research and Development Interests

