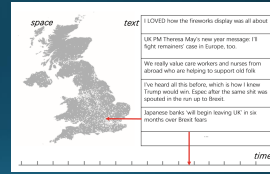
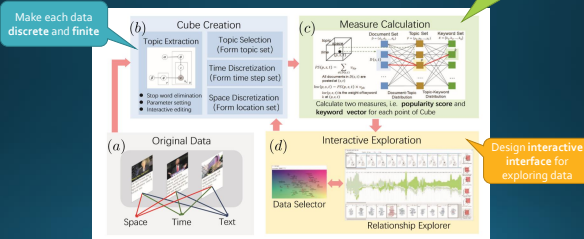
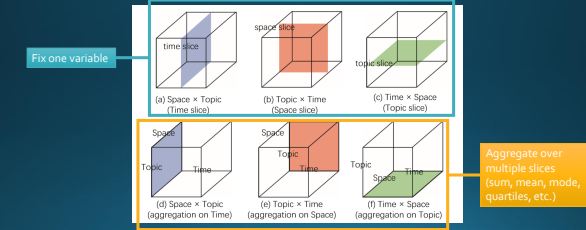


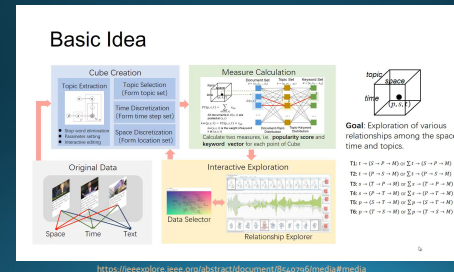
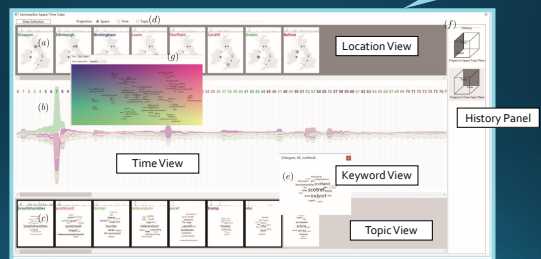
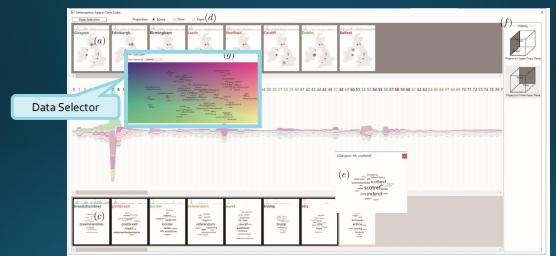
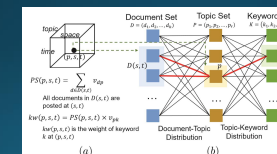
Presented by Mint Tanprasert
CPSC 547, Winter 2019, UBC



P x S x T
to Pics x Space x Time



- **TEXT:** is represented by a vector of topic weights
 - *Topic* is defined as a probability distribution over a given set of *keywords*
 - Latent Dirichlet Allocation (LDA) – a probabilistic topic modeling method
 - Show all topics and let users select the ones they want to explore
- **TIME:** divide into intervals that are meaningful to humans e.g. weeks.
- **SPACE:** use individual and public activity locations, e.g. cities.



- **Data**
 - A table where each item has 3 attributes
 - Text (arbitrary and unstructured)
 - Location (spatial)
 - Time (sequential)
- **Derived**
 - Discretized and finite representation of each attribute
 - Popularity score and keyword vector

- Encode
 - Color-code objects based on position in a projection
 - Use geographic map with glyphs
 - Size-code keyword based on importance
 - Indicate popularity score by linear ordering
- Manipulate
 - Pop-up window
 - 2D navigation
- Facet
 - Superimpose streams in time view (extended mode)
 - Linked navigation
- Reduce
 - Filter with "slices"
 - Aggregate with "projection"

- Good use of the metaphor
 - A good conceptual model for developing database operations (from paper)
- Filtering and aggregation allow for exploring large amount of data
- Responsive and well-organized view coordination
- Uniformity in visual design
- Flexible navigation that supports various topics and tasks
- Follow “Overview First, Zoom and Filter, Details on Demand”

- Cannot observe the variation for all 3 dimensions, simultaneously (must slice or project first)
- The "cube" dimensions can't be too big (from paper)
- Information loss in discretization (from paper)
- Limited number of "cards" can be shown at a time
- Automated item sorting could create change blindness
- Spatial positions of keywords in keyword view is meaningless
- "Number of specific mentioned keywords may not really reflect the public opinions." (Expert feedback from paper)

Any questions?