**Motivation**
What are some features (verbal/non-verbal) of a good presentation?
- Avoid incessant hand movements
- Don’t leave hands idle

**Proposed Solution**
- Quantitative analysis on the actual usage of presentation techniques
- In a collection of good presentations (TED talks)
- To gain empirical insights into effective presentation delivery

**User-Centered Design Process**

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**Motivation**

**Proposed Solution**

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**Visual Design**

**Unified Color Theme**

**TED talk glyph**

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**Data Processing**

**Analytical Goals**

**System Architecture**

**Interaction**

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**Data Processing (cont.)**

**Visual Design**

**User-Centered Design Process**

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**Narrative**

**Analytical Goals**

**Visual Design**

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**Data Processing**

**Analytical Goals**

**Visual Design**

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**Data Processing**

**Analytical Goals**

**Visual Design**

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**Data Processing**

**Analytical Goals**

**Visual Design**

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**Analysis Summary (cont.)**

- **How (encode):**
  - 2D plot
  - Bar chart
  - TED talk glyph (using pie chart, bar chart, distance and direction of triangles)
  - Sankey diagram
  - Link (relation between each talk and aggregated data)

- **How (Facet):**
  - Partition into multiform views
  - Sparse view for comparison
  - Linked highlighting
  - Linked navigation
  - Overview with selection in overview populating detail view
  - Zoom & pan (projection view)

- **How (Manipulate):**
  - Select, clusters, control panel & video view
  - Collapse and expand
  - Focus & context
  - Intra- & inter-cluster & video analysis

**Analysis Summary (cont.)**

- **Strengths:**
  - Carefully designed with well-justified design choices
  - Synchronized view visualization (screen-space effective & different levels of details)
  - Consistency in visual mappings
  - Reduce cognitive/memory burden
  - Carefully designed glyphs
  - Inter, intra-cluster & video analysis

- **Weaknesses:**
  - Why TED talks / Which TED talks
  - Only evaluated on a subset of TED talks
  - Some parts are not related to any of the tasks
  - Does not discuss the ability of the system to scale when number of features or videos or duration of videos increases
  - Only captures simple relationships among presentation techniques
  - Unnecessary encoding / Details without exploitation (links, timelines)

**Evaluation -> User Study**

- **With 16 students**
  - To demonstrate the capacity of undertaking visualization tasks and gather feedback
  - Went through a series of tasks and provided feedback

- **Results:**
  - All participants understood and completed tasks
  - They agreed system is usable for video collections
  - Less satisfied with video comparison view

**Evaluation -> Case Study**

- **With 3 experts and 3 students**
  - To reflect the fulfillment of analytical goals and gain insight
  - Went through a series of tasks and provided feedback

- **Research Scope**
  - To demonstrate the capacity of undertaking visualization tasks and gather feedback

- **Findings:**
  - System reached the analytical goals
  - They agreed system is usable for video collections
  - Links (relations between each talk and aggregated data)

**Projection View**

- For cluster analysis
- Faceted search

**Control Panel**

- 3D visual space
- Feature filtering

**Comparison View**

- **Comparison View -> Presentation Fingerprinting (cont.)**
  - For each TED talk
  - Faceted search

- **Comparison View -> Presentation Fingerprinting**
  - Rows (top to bottom): Rhetorical mode, Gesture, Posture
  - Uniform time interval of 5% of the talk duration
  - Embedded bar chart: Top concurrence tuples

- **Comparison View -> Video View**
  - Video player: Video, Title, Tag
  - Word cloud: Frequent words with colors representing rhetorical mode
  - Script viewer: Transcripts of the currently playing segment

**Elastic Timeline**

- Two layers
  - First layer: Timeline is segmented according to the transcript snippet
  - Usage of presentation technique arranged vertically
  - Row 1: Rhetorical mode
  - Row 2: Three types of body posture
  - Bar chart: The proportion of corresponding posture during the time interval

**Analysis Summary**

- **What (derived):**
  - Tags for postures per half sec/gestures per half sec/rhetorical mode per clipset
  - Feature vector (temporal proportion of nine techniques)

- **Why (tasks):**
  - F1, F2