Analysis, Indexing and Visualization of Presentation Videos

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Motivation & Domain Description

Videos of presentations are tools nowadays employed in a large variety of systems:
- Distance or E-Learning
- Conference proceedings
- Student presentations
- Corporate talks

A quickly increasing quantity of presentation videos is publicly available and retrievable on the web

GOAL: Help users efficiently and effectively access (educational) information

GOAL: Ensure users satisfaction with how the information extracted from the videos is presented

Domain challenges: "WILD"!
- lack of additional sources of information (e.g. electronic copies of slides)
- Slides truncation
- Compression
- Standard processing does not apply

Motivation:
- Student presentations
- Corporate talks

• Waste goes to Landfills
• Energy Source
• Cost Efficiency

1. User Preferred Face Indexes

Experimental Setup:
- 375 Amazon Mechanical Turk HITs
- 100 videos x 35 unique speakers

Viola Jones detector
- Color skin filter
- MTTrack (prediction)
- Viola Jones detector (observation)
- Simplified Kalman filter: \( \hat{F} = \alpha F + (1 - \alpha) \cdot H \)

Results:
- Most people prefer Head & Shoulder FRONTAL view
- 35% of votes went to Left and Right ¾ Head & Shoulder!

Proposed Solution

User Preferred Face Indexes

Graphics Index Generation

Textual Index Generation

BACK-END

FRONT-END

Visualization of Presentation Videos

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