

SMART VIDEO BUDDY

As users collect tremendously growing amounts of images and video, they require intelligent strategies for managing and accessing their visual content. Our technology faces this challenge by automatically detecting semantic concepts in videos:

1. A video stream is automatically analyzed
2. Objects, places, and activities are recognized
3. The video is enriched with recognition results

Research

Our technology performs an analysis of video content by feeding a scenes' motion, color, and texture to a variety of statistical learning algorithms. A key challenge lies in the *training* with labeled examples. To reduce the manual effort for the user to a minimum, our research focuses on an **autonomous learning from web portals** such as Flickr or YouTube.



Selected Publications

Ulges, Schulze, Koch, Breuel: *Learning Automatic Concept Detectors from Online Video. Computer Vision and Image Understanding, 2009.*

Duan, Ulges, Breuel, Wu: *Style Modeling for Tagging Personal Photo Collections. CIVR, 2009.*

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Use Cases

Detection

Our system allows you to search videos for certain scenes: you enter a keyword related to an object, location, or action (like "Eiffel Tower", "beach", or "interview"), and the system automatically detects corresponding scenes within your video collections.



Recommendation

By understanding what you watch (e.g., a soccer match), our system can on the fly recommend things that might be of interest to you: we can suggest other videos, point you to the latest news, or even recommend products and thus realize a personalized advertisement.



Personal Video Assistant

Ultimately, automatic video understanding can serve as a *personal tool* that recalls videos you have been watching, allows you to search your "visual memory", identifies your preferences, and realizes a highly efficient content management this way.



SHOW CASE



TubeTagger
madm.dfki.de/demo/tubetagger



Smart Video Buddy
madm.dfki.de/demo/smartvideobuddy



TubeFiler
madm.dfki.de/demo/tubefiler