

# IRB R&D

**AME**  
AUTOMATIC  
METADATA  
EXTRACTION

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## Semantic metadata extraction for audio-visual content using deep learning methods

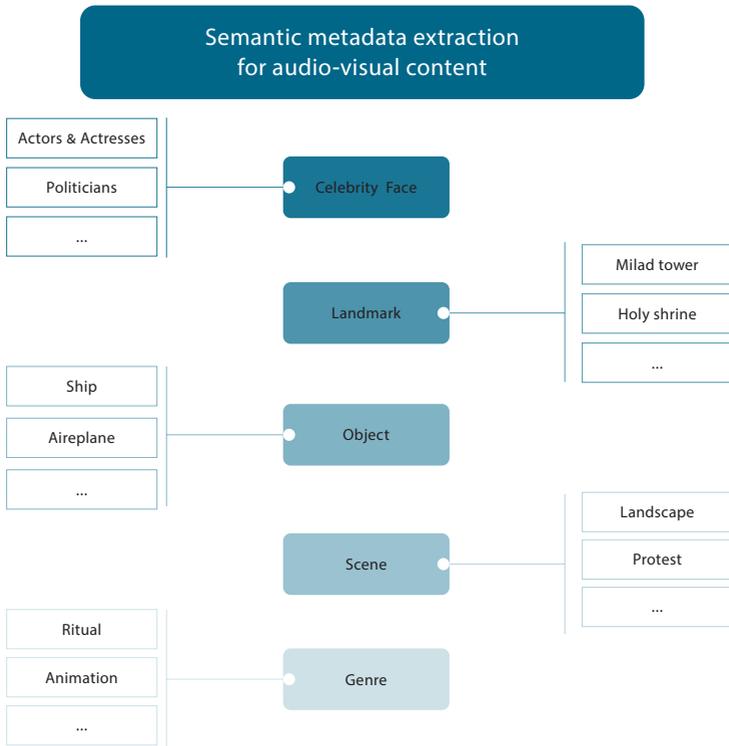
With the amount of digital image and video data in archives exploding and an ever increasing addition of newly produced and digitized content, the challenge of keeping the content easily accessible is becoming more and more difficult.

It is highly uneconomic to screen and annotate all content in person. Also, since current image and video search engines predominantly rely on metadata for retrieval, text descriptions which misrepresent the visual content can lead to inaccuracies.

Thus, alternate approaches which rely on visual content understanding for automatic annotation and retrieval of images and videos are needed to address such inconsistencies.

IRIB R&D developed a cutting-edge audio-visual deep-learning technology trained on a large data set of videos to recognize audio and video content and tag them accurately.

This system is one of the first products employs deep neural networks to draw out the content of the visual data using the object, landmark, scene, genre and face recognition services. The system has the ability to compete with the top products in the category of visual data classification in a sufficiently smart and automated way. In this system, the main focus is on visual features.



The system is relevant to multimedia asset management including

- content-aware video search engines
- concept-aware video recommender systems
- personalized video summarization

The accuracy of the presented models varies from 80 to %99 depending on the training dataset.

It is also completely isolated and offline and does not need to communicate with the global network, which has completely eliminated security concerns.

## Islamic Republic of Iran Broadcasting (IRIB) Research and Development

IRIB R&D has made major advances in applying basic research and innovation in media technology. It develops innovative new products and technologies in broadcast/broadband industry that leads the development of future technologies in IRIB. Our R&D projects often involve collaborations with public or private entities, including universities, government laboratories, technology start-ups and incubators, research institutes and partner companies.



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