

New system can improve video-sharing Web sites like YouTube

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(PhysOrg.com) -- As video sharing websites like YouTube continue to grow in popularity, so do challenges around proper labeling of videos and monitoring for copyright infractions.

But one student from the University of Toronto has created a framework that can improve the efficiency of such websites and cut down on copyright infringement.

The Tiny Videos system, created by Computer Engineering graduate student Alex Karpenko, is a groundbreaking system that allows extremely large amounts of video data to be compressed and then searched based on content. Essentially, the system can recognize and find duplicate video segments and then properly label them.

"This system is extremely beneficial for users because it can help them quickly and easily find the specific videos they're looking for," says Karpenko. "It's also useful for copyright holders because it can identify video clips that violate copyright laws."

The system, which was tested using a massive sample of 50,000 videos, has several practical applications:

-- When someone uploads a video to YouTube, they may not label that video properly, which can make it difficult for other users to find. The Tiny Videos system searches uploaded videos for generic characteristics and assigns them a more useful label or tag so users can find videos

easily.

-- Since the Tiny Videos system can quickly search for specific content with large video collections, it can quickly identify videos that violate copyright infringement and alert copyright holders.

-- The Tiny Videos system can also help users find similar or related coverage. For example, the system could help them identify coverage of the same political event that was aired on CNN, the BBC and CBC.

"This system is truly revolutionary in its ability to improve popular video sharing websites for everyone," says Parham Aarabi, an associate professor of Electrical and Computer Engineering at U of T and Canada Research Chair in Internet Video, Audio, and Image Search, who supervised the creation of the system.

Source: University of Toronto

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