

1. Video Summarization



Learn to oil the spokes of your bike properly with expert tips in this free sports video.

2. Proposed Multi-level Semantic Concepts

Input Video



Level 1 SPECIFIC CONCEPTS

weather, salt, air, exposure, wheel, tensioning	measure, month, oil, drop, end, spoke, action
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Level 2 ABSTRACT CONCEPTS	oil, spokes, bike, sports
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Level 3 VIDEO SUMMARY	Learn to oil the spokes of your bike properly with expert tips in this free sports video.
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3. Flowchart of Proposed Approach

Input: IMAGE/VIDEO

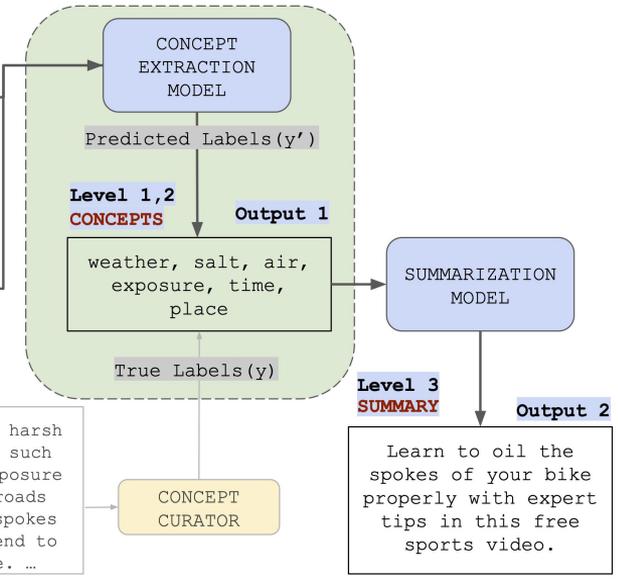


Input: SPEECH



ANNOTATIONS

... Particularly in harsh weather climates such as salt air or exposure to salt on the roads the ends of the spokes over time will tend to freeze in place. ...



4. Comparison with existing models

Model	Rouge-L	Meteor
LM	32.3	15.0
Seq2seq	54.5	27.6
Multilevel seq2seq	51.2	30.4

5. Example Outputs



exercise, fitness, trainer, video

Learn how to do pilates exercise with tips from a fitness trainer in this free exercise video.