

DETECTION OF FROZEN SUBTITLES IN VIDEO USING MACHINE LEARNING

MASTER THESIS 30p

BACKGROUND

We are a video analytics company helping more than 100 TV operators all over the globe monitor their services, create transparency, insights and make it possible to take decisions based on real data. Our largest customers monitor hundreds of channels in one thousand locations including their head-end and distribution network.

ASSIGNMENT

When broadcasting a video with subtitles it is sometimes useful to burn in the subtitles into the video frames themselves rather than send the subtitles as separate information. When doing this it is important to know that the subtitles work as expected. A common problem is that the subtitles "freeze" due to errors in the encoder.

Devise an algorithm using machine learning techniques to detect frozen subtitles from decoded video frames. The problem is two-fold, both detecting where in the image there are subtitles and differentiate that from other text in the image. And then detect if that text is frozen over some period of time.

Bonus task: An additional problem is that the text itself is correct at the correct time. Devise an algorithm that compares the burned in subtitles with a reference subtitle text file and using the clock of the stream to find that the subtitle text is shown at the correct time.

INFO

We're a hard-core engineering company that appreciate pragmatic problem solving, learning and tight communication. In your work you'll be supported by an

experienced engineer to help you remove obstacles, guide you and be a discussion partner. Your thesis at Agama will be a chance both to show your skills but also to discuss, learn and have a giving first working experience. We can promise that.

INTERESTED?

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