

Title: The Big Video Data Challenge: creating compact memories of video data***Supervising team:***

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This Ph.D. project is related to the big data challenge, where methods and techniques must be developed to handle large corpora of video data.

Video data contains very rich information that can be employed to understand an unfolding scene from one or more points of view. The problem with video streams is that data becomes unmanageable very rapidly. The challenge is to be able and devise methods to extract information and store it in reusable form. Acquired information can then be used to identify and recognise events. Both stationary parts of a scene and dynamics there-of are of interest, to classify parts of a scene and movement within. Video streams could be acquired with stationary, but also moving cameras, both very interesting problems with very different characteristics.

The aim of this Ph.D. project is to study a method that can encompass both stationary and moving cameras and be able to capture salient information about an unfolding scene. The candidate will be engaged in the development of algorithms to extract salient information from video data streamed from one or more cameras, create a statistical model of the acquired information and provide means to classify new scenes.

The candidate must have gained a first degree in a technical discipline, with strong mathematical, statistical and programming skills. The appointed person will be working within the Robot Vision Team (RoViT, rovit.kingston.ac.uk), an interdisciplinary research group working in machine and human vision with strong expertise in image and video understanding in private and public spaces. The developed methods will be tested in both contexts of assisted living and video surveillance.