Ischemic Segment Detection using the Support Vector Domain Description - DTU Orbit (15/12/2018)

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Myocardial perfusion Magnetic Resonance (MR) imaging has proven to be a powerful method to assess coronary artery diseases. The current work presents a novel approach to the analysis of registered sequences of myocardial perfusion MR images. A previously reported AAM-based segmentation and registration of the myocardium provided pixel-wise signal intensity curves that were analyzed using the Support Vector Domain Description (SVDD). In contrast to normal SVDD, the entire regularization path was calculated and used to calculate a generalized distance. The results corresponded well to the ischemic segments found by assessment of the three common perfusion parameters; maximum upstroke, peak and time-to-peak obtained pixel-wise.

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