Medical Imaging Summer School 2014

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Medical Imaging meets Computer Vision

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Lecture 1: Decision Forests for Medical Image Analysis

I will talk about theory and practice of decision forests and their application in medical image analysis. In particular I will talk about classification, regression and manifold forests. I will also show details about how to use those for e.g. organ localization and anomaly detection in medical images. I will provide pointers to freely available code and exercises.

Lecture 2: Semantic Segmentation by Deep Learning

I will talk about entangled decision forests and their relationship to deep learning. I will also demonstrate how geodesic entangled forests have been used for the semantic segmentation of medical and non medical images. Geodesic decision forests can be thought of as a version of structure-output learning which move the state of the art well beyond Markov random fields