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CENTRE FOR THE STUDY OF MANUSCRIPT CULTURES

The Centre for the Study of Manuscript Cultures (CSMC)
announces an Informal Talk

by

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A2iA (Artificial Intelligence and Image Analysis), Paris

Deep Neural Networks: Where Do We Stand in Handwriting Recognition?

A popular approach in handwriting recognition consists in scanning a text line image with a sliding window, and extracting features at each position. The obtained sequence is subsequently modeled by Hidden Markov Models. Associated with neural networks and with a language model, these models yield low transcription errors. The first part of this talk presents the important aspects to take into account when building neural networks for handwriting recognition in the hybrid NN/HMM framework. In particular, the focus is put on the big performance gain achieved by deep neural networks in the past few years, and how they are impacted by different modeling choices (inputs, outputs, size, architecture), and optimization procedures. The results suggest that deep neural networks are powerful enough to not be limited to the emission model of HMMs, and to occupy a larger place in the recognition pipeline. I will present, in a second part, different neural network architectures to recognize character sequences directly from images without pre- or post-processing. The talk will be concluded with a discussion of the new challenges in handwriting recognition.

Monday, 11 July 2016 at 2 pm
Room 2002, CSMC