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Engineer / PostDoc position in Deep Learning for Handwriting Recognition

Context

As for many applications of computer vision, significant progress have been achieved these last years in the field of Handwriting Recognition, thanks to Deep Learning and Recurrent Neural Networks. Research at LITIS are conducted in this direction [1,2,3]. However, despite these progress, a reading system architecture is still composed of multiple components organized sequentially (a typical architecture includes: layout analysis of the document image, handwriting recognition, language processing). Deep learning approaches are now the state of art for any of these tasks, but their integration into a single system has not been explored much [4,5,6].

The Machine Learning team at LITIS is involved in a common laboratory with one industrial partner to develop new technologies for handwriting recognition using Mobile capturing devices like smart phones. The industrial partner has launched a capturing application with document workflow management facilities. LITIS will contribute to develop handwriting recognition technologies for field reading (titles, dates, etc...), indexation, and classification of documents by their textual content.

Missions

The engineer or postdoc recruited will be in charge of developing a Machine Learning based processing platform so as to implement a full recognition chain dedicated to handwritten documents recognition (image processing, recognition, language processing). He (she) will contribute to the progress of the technology, considering the expected application needs and performance. The successful applicant should have a strong record in statistical machine learning, and have experience in one popular platform and programming language in the field, so as to design, develop and make the prototype evolve. He (she) will also be involved in the specification process of data collection scenarii and the design of learning and test datasets for various target languages and various use case of the application at end (Information Retrieval, Personalization, etc...).

Skills

Computer Engineer, with record on Machine Learning **or** PhD in machine learning, demonstrates hability to work in a team, curious and rigorous spirit esprit.

Technical skills : C/C++, Anaconda/Python, Tensor Flow /CNTK, Keras, and other librairies (Numpy, OpenCV, Kaldi ..) required for Deep Learning.

Contact : Thierry.Paquet@univ-rouen.fr

Place : LITIS Laboratory– Campus du Madrillet – Normandie Rouen University

Duration: renewable 18 month contract, starting september 2017

Bibliography

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- [6] Raymond Smith, Chunhui Gu, Dar-Shyang Lee, Huiyi Hu, Ranjith Unnikrishnan, Julian Ibarz, Sacha Arnoud, and Sophia Lin, End-to-End Interpretation of the French Street Name Signs Dataset, *International Workshop on Robust Reading, Amsterdam, 9 October 2016*.
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