

Text Deconvolution Saliency TDS

a deep tool box for linguistics analysis

The 56th Annual Meeting of the Association for Computational Linguistics - ACL 2018

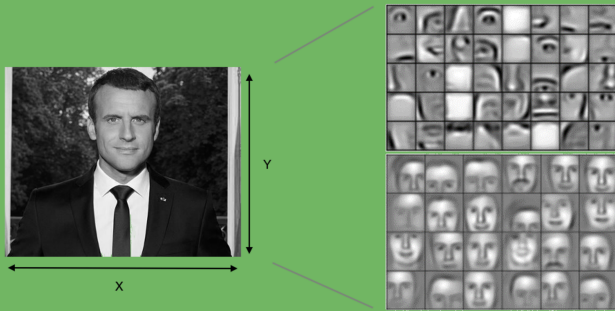
lvanni@unice.fr

L. Vanni, M. Ducoffe, D. Mayaffre, F. Precioso
D. Longree, V. Elango, N. Santos, J. Gonzalez, L. Galdo, C. Aguilar

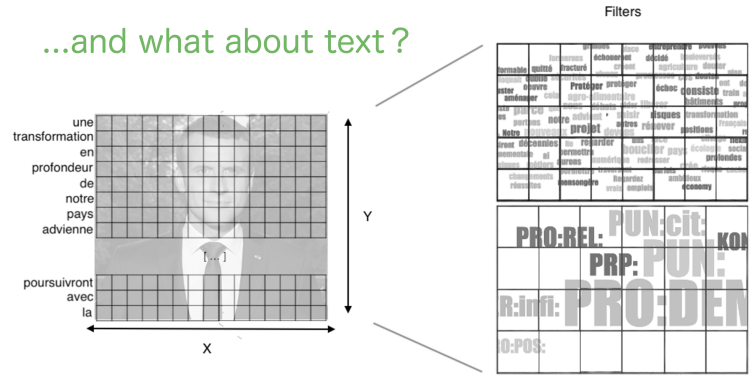
ducoffe@i3s.unice.fr

IDEA CONVOLUTION

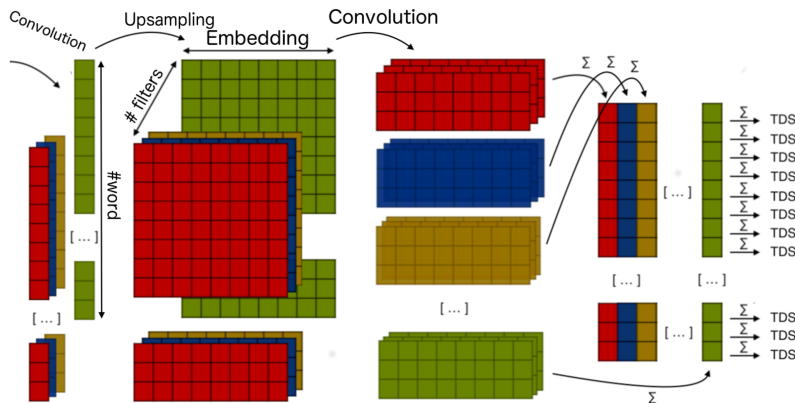
Well known for images...



...and what about text?



GOAL DECONVOLUTION



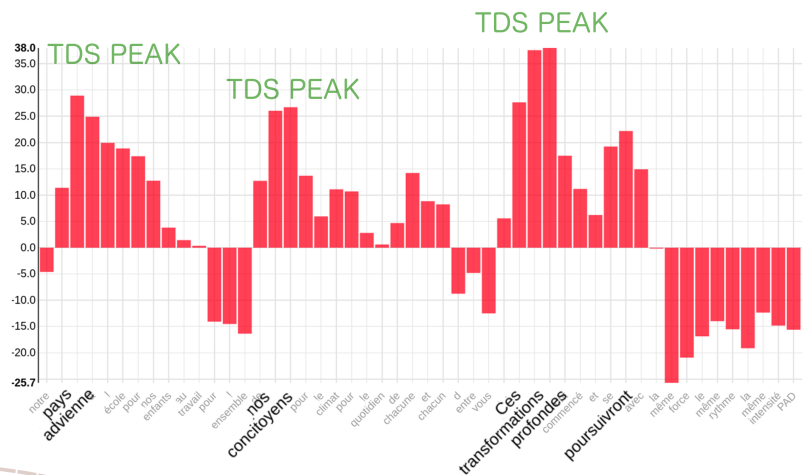
Can we (humans) read these filters?

Yes : Deconvolution introduces new metrics called TDS. Strong correlation between linguistic patterns and TDS.

E. Macron - 31st december 2017 :

[...] notre pays advienne à l'école pour nos enfants, au travail pour l'ensemble de nos concitoyens pour le climat pour le quotidien de chacune et chacun d'entre vous . Ces transformations profondes ont commencé et se poursuivront avec la même force le même rythme la même intensité [...]

- IDENTIFICATION OK
- HOW THE MODEL TAKES THE DECISION ? →



Deep learning auto-detects specific linked words.

TDS is a new tool for linguistics patterns (motives) detectors.

