Publications

1. Design of automatic classifiers based on deep neural networks able to reach ophthalmologist performance level.

   Jordi de la Torre, Aïda Valls, and Domenec Puig. "Diabetic Retinopathy Detection Through Image Analysis Using Deep Convolutional Neural Networks". In: *Artificial Intelligence Research and Development - Proceedings of the 19th International Conference of the Catalan Association for Artificial Intelligence, Barcelona, Catalonia, Spain, October 19-21, 2016*. Ed. by Àngela Nebot, Xavier Binefa, and Ramon López de Mántaras. Vol. 288. Frontiers in Artificial Intelligence and Applications. IOS Press, 2016, pp. 58–63. ISBN: 978-1-61499-695-8

2. Study of the usage of Quadratic Weighted Kappa index as a Deep Learning Loss Function for the optimization of ordinal regression problems.

   Jordi de la Torre, Domenec Puig, and Aida Valls. "Weighted kappa loss function for multi-class classification of ordinal data in deep learning". In: *Pattern Recognition Letters* (2017). ISSN: 0167-8655 Impact Factor: 1.952 (Q2)

3. Design of a generalized model for the interpretation of results reported by deep learning classifiers.

   Jordi de la Torre, Aida Valls, and Domenec Puig. "A Deep Learning Interpretable Classifier for Diabetic Retinopathy Disease Grading". In: *arXiv preprint arXiv:1712.08107* (2017) Accepted for publication in Neurocomputing. Impact Factor: 3.241 (Q1)

4. Design of a method for compressing feature space internal representations of deep learning models.

   Jordi de La Torre et al. "Identification and Visualization of the Underlying Independent Causes of the Diagnostic of Diabetic Retinopathy made by a Deep Learning Classifier". In: *CoRR* abs/1809.08567 (2018). arXiv: 1809.08567. URL: http://arxiv.org/abs/1809.08567