MohamedAli Computer Vision Center, Edifici O, UAB 08193 Souibgui Bellaterra, Barcelona, Spain

Pre-Doc Researcher

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Education and Certificates

Oct **PhD student in computer science**, Autonomous university of Barcelona, 2019–Now Computer Vision Center (CVC), Topic: Recognition of handwritten ciphers.

2018 **Certificate in Deep Learning Specialization**, a 5-course specialization by deeplearning.ai, on Coursera.

Sep 2015- Master's degree in computer science, Faculty of sciences, Monastir,

Mar 2018 Master's degree.

Modeling of automatic reasoning systems

Sep 2012- **Bachelor's degree in computer sciences**, Faculty of sciences, Monastir,

Jun2015 Bachelor's degree.

Work Experience

Oct Pre-doctoral Researcher, Computer Vision Center (CVC), Barcelona, 2019-Now Spain.

Computer vision within the document analysis group

Oct Computer Vision Researcher, Digital Research Center of Sfax, Sfax,

2018–Aug Tunisia.

2019 Computer vision within the deep vision group

Mai 2019- Research Intern, Computer vision center (CVC), Barcelona, Spain.

Jun 2019 Computer vision within the document analysis group

Jan 2019– Intern, Satoripop, Sousah, Tunisia.

Apr 2019 Computer Vision and NLP within the Research and Development Team

Feb 2017– Intern, MARS Laboratory, Monastir, Tunisia.

Sep 2017 Internship related to the master thesis

Areas of Expertise

- Deep Learning (ANN, CNN, GANs, Transformers, RNN, ...)
- Computer Vision (Object Detection, Classification, OCR, Image Processing) and Enhancement, Image Generation, ...)

Computer skills

- Python (Pytorch ,Keras, Tensorflow, OpenCV, ...)
- o Matlab, C, C++, C#, Java . . .
- Javascript, HTML, CSS (Bootstrap), . . .

Research projects

2019- Now

Decrypt project: Recognition of handwritten ciphers using computer vision and deep learning tools, Computer Vision Center, Barcelona.

Within the DECRYPT project, we release resources and tools with open access to facilitate research in historical ciphers, allowing collection, analysis and decryption of historical cipher texts images.

Publications

- Conferences: Souibgui, M. A.*, Biswas, S.*, Jemni, S. K.*, Kessentini, Y., Fornés, A., Lladós, J, & Pal, U. (2022). DocEnTr: An End-to-End Document Enhancement Transformer. In 2022 26th International Conference on Pattern Recognition (ICPR) (Accepted).
 - Souibgui, M. A.*, Biten, A. F.*, Dey, S.*, Fornés, A., Kessentini, Y., Gomez, L., Karatzas, D. & Lladós, J (2022). One-shot Compositional Data Generation for Low Resource Handwritten Text Recognition. In Winter Conference on Applications of Computer Vision (WACV) (pp. 935-943).
 - o Chen, J., Souibgui, M. A., Fornés, A., & Megyesi, B. (2020, May). A Web-based Interactive Transcription Tool for Encrypted Manuscripts. In Proceedings of the 3rd International Conference on Historical Cryptology HistoCrypt 2020 (No. 171, pp. 52-59).
 - Souibgui, M. A., Fornés, A., Kessentini, Y., & Tudor, C. (2020). A Fewshot Learning Approach for Historical Ciphered Manuscript Recognition. In 2020 25th International Conference on Pattern Recognition (ICPR). IEEE.
 - **Souibgui, M. A.**, Kessentini, Y., & Fornés, A. A Conditional GAN Based Approach for Distorted Camera Captured Documents Recovery. In 2020 4th Mediterranean Conference on Pattern Recognition and Artificial Intelligence (MedPRAI). Springer.
 - o Chen, J., Souibgui, M. A., Fornés, A. & Megyesi, B. (2021, August). Unsupervised Alphabet Matching in Historical Encrypted Manuscript Images. In the 4th International Conference on Historical Cryptology HistoCrypt (pp. 34-37).

^{*} Equal contribution.

- Journals: Souibgui, M. A., & Kessentini, Y. (2020). DE-GAN: A conditional generative adversarial network for document enhancement. IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI).
 - Jemni, S. K.*, Souibgui, M. A.*, Kessentini, Y. &. Fornés, A (2021). Enhance for Better Reading: A Multi-Task Adversarial Network for Handwritten Document Recovery. Pattern Recognition. 123.
 - Souibgui, M. A., Fornés, A., Kessentini, Y., & Megyesi, B. (2022). Few Shots Are All You Need: A Progressive Few Shot Learning Approach for Low Resource Handwritten Text Recognition. Pattern Recognition Letters.

Workshops: • Torras, P., **Souibgui, M. A.**, Chen, J., & Fornés, A. (2021, September). A Transcription Is All You Need: Learning to Align Through Attention. In International Conference on Document Analysis and Recognition (GREC Workshop) (pp. 141-146). Springer, Cham.

Publications Under Revision

Conferences: • Souibgui, M. A.*, Biswas, S.*, Mafla, A.*, Biten, A. F.*, Fornés, A., Kessentini, Y., Lladós, J., Gomez, L., & Karatzas, D. (2022). DIAE: Degradation Invariant Autoencoders for Text Recognition and Document Enhancement. In 2023 AAAI Conference on Artificial Intelligence (AAAI)(Under Revision).

Research interests

- Artificial intelligence
- Computer vision
- Machine learning / Deep learning
- Document analysis
- Natural language processing

Languages

English Excellent writing, Excellent speaking

French Good writing, good speaking

Arabic Native language

Awards

• Best student paper award: The prize was given by the ICPR 2020 organizing committee for the paper entitled: A Few - shot LearningApproach for Historical Ciphered Manuscript Recognition