CORENTIN KERVADEC

PhD in Machine Learning

@ corentin.kervadec@wanadoo.fr | +33 6 30 49 14 35 | Rennes, France
corentinkervadec.github.io | Corentin Kervadec | @CorentK

ABOUT ME

I study deep learning applied to language, with a special interest in multimodal reasoning.

ML SKILLS

Pytorch | Tensorflow | NLP | CV | Deep Learning | Vision & Language

CODING

Python | C/C++ | Linux

LANGUAGE

French: Native
English: Working level
Spanish: Novice

REFEREES

Christian Wolf
Associate Professor
@ INSA Lyon
christian.wolf@insa-lyon.fr

Moez Baccouche
AI Researcher
@ Orange
moez.baccouche@orange.com

Grigory Antipov
AI Researcher
@ Orange
grigory.antipov@orange.com

Khaoula Elagouni
Team manager
@ Orange
khaoula.elagouni@orange.com

HOBBIES

Music | Guitar | Reading

EXPERIENCE

AI researcher | Orange Labs

Nov. 2021 – now | Rennes, France

- Conducting research on deep learning x neurosciences for NLP

AI researcher (joint industry-academia thesis) | Orange Labs

Sep. 2018 – Sep. 2021 | Rennes, France

- Conducting research on deep learning applied to vision and language
- Publishing for top-tier ML/CV conferences (including 4 A*)
- Reviewing for top-tier ML/CV conferences (outstanding reviewer at ICCV'21)
- Communicating on my work during seminars (including with non-expert audience)

AI researcher (Master's internship) | Orange Labs

Feb. 2018 – Aug. 2018 | Rennes, France

- Working on facial expression recognition for emotion estimation
- Ranked 3th at the Emotion in the Wild 2018 challenge (ICMI'18)

Electronics researcher (internship) | Tallinn University of Technology

Jun. 2017 – Sep. 2017 | Tallinn, Estonia

- Working on transient computing for autonomous wireless sensor networks

EDUCATION

Ph.D. in Machine Learning | LIRIS lab., INSA Lyon

2018 – 2021 | Lyon, France

Thesis title: " Bias and Reasoning in Visual Question Answering"

Advised by C. Wolf, M. Baccouche and G. Antipov

Deep Learning | Visual reasoning | Bias reduction | Visual Question Answering (VQA)

Master's Degree in Electronics & Computer Engineering | INSA Rennes

2015 – 2017 | Rennes, France

Thesis title: " Emotion Representation & Generation using a Deep Learning Approach"

Signal processing | Applied mathematics | Computer sciences | Computer vision | Electronics

Preparatory cycle | INSA Rennes

2013 – 2015 | Rennes, France

- Scientific common core, from thermodynamics to computer sciences

RESEARCH PUBLICATIONS

Supervising the transfer of reasoning patterns in VQA | arxiv-link

- ***Kervadec, C.**, *Wolf, C., Antipov, G., Baccouche, M., Vuillemot, R., and Nadri, M.*
- In Advances in Neural Information Processing Systems (NeurIPS), 2021 (A*).

Roses are red, violets are blue... but should vqa expect them to? | arxiv-link | Github

- ***Kervadec, C.**, Antipov, G., Baccouche, M. and Wolf, C.*
- In IEEE Computer Vision and Patter Recognition (CVPR), 2021 (A*).

How transferable are reasoning patterns in VQA? | OpenReview-link | Demo

- ***Kervadec, C.**, *Jaunet, T., Antipov, G., Baccouche, M., Vuillemot, R., and Wolf, C.*
- In IEEE Computer Vision and Patter Recognition (CVPR), 2021 (A*).

VisQA: X-raying vision and language reasoning in transformers | arxiv-link | Demo | Github

- *Jaunet, T., ***Kervadec, C.**, Antipov, G., Baccouche, M., Vuillemot, R., and Wolf, C.*
- In IEEE VIS, 2021 (A*).

Weak supervision helps emergence of word-object alignment and improves vision-language tasks | arxiv-link | video

- ***Kervadec, C.**, Antipov, G., Baccouche, M. and Wolf, C.*
- In European Conference on Artificial Intelligence (ECAI), 2020.

Estimating semantic structure for the vqa answer space | arxiv-link

- ***Kervadec, C.**, Antipov, G., Baccouche, M. and Wolf, C.*
- Preprint arXiv, 2020.

The Many Variations of Emotion | arxiv-link

- ***Kervadec*, C.**, *Vielzeuf*, V., Pateux, S., and Jurie, F.*
- In IEEE International Conference on Automatic Face & Gesture Recognition (FG), 2019.

Cake: Compact and accurate k-dimensional representation of emotion | arxiv-link

- ***Kervadec, C.**, Vielzeuf, V., Pateux, S., Lechervy, A., and Jurie, F.*
- In Image Analysis for Human Facial and Activity Recognition (BMVC workshop), 2018.

An occam's razor view on learning audiovisual emotion recognition with small training sets | arxiv-link

- *Vielzeuf, V., ***Kervadec, C.**, Pateux, S., Lechervy, A., and Jurie, F.*
- In International Conference on Multimodal Interaction (ICMI), 2018.

Autonomous wireless sensor networks: Implementation of transient computing and energy prediction for improved node performance and link quality

- *Ahmed, F., ***Kervadec, C.**, Le Moullec, Y., Tamberg, G., and Annus, P.*
- In The Computer Journal, 2019.