



CORENTIN KERVADEC

PhD in Machine Learning

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Corentin Kervadec

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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

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Moez Baccouche

AI Researcher

@ Orange

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Grigory Antipov

AI Researcher

@ Orange

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Khaoula Elagouni

Team manager

@ Orange

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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.