Fabien Baradel

Research Scientist

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EDUCATION

INSA Lyon   Lyon, France
PhD in Computer Vision & Machine Learning   *October 2019 - June 2020*
· Thesis: "Structured deep learning for video analysis" advised by Christian Wolf and Julien Mille.

ENSAI   Rennes, France
MSc in Statistics, "Diplôme d'ingénieur"   *2013 - 2016*
· Major in data science, suma cum laude (top of class), high honors.
· Erasmus semester at University of Warkwick, UK.
· BEng in Applied Economics at University of Paris Dauphine, France (double degree agreement).

University of Grenoble Alps   Grenoble, France
BSc in Applied Mathematics   *2010 - 2013*
· Suma cum laude (top of class), high honors.

WORK EXPERIENCE

NAVER LABS Europe   Grenoble, France
Research Scientist   *September 2020 - present*
· Conducting research in computer vision and machine learning in the CV team.

INSA Lyon - LIRIS   Lyon, France
Doctoral Researcher   *October 2016 - June 2020*
· Conducting research on deep learning methods for computer vision.
· Publishing in top-tier conferences on topics related to human action understanding and causal reasoning.
· Integration of research methods into robotic platform.
· Animation of weekly reading group meeting. & co-supervision of master student interns.
· Active collaboration with Natalia Neverova (Research Scientist at Facebook AI Research).

Google   Grenoble, France
Student Researcher   *April 2019 - March 2020*
· Worked on self-supervised learning from unlabelled video data with Cordelia Schmid and Chen Sun.

Xerox Research Europe Center   Grenoble, France
Research Intern   *March 2016 - September 2016*
· Worked on unsupervised domain adaptation advised by Boris Chidlovskii and Gabriela Csurka.

LICIT - IFSTTAR   Lyon, France
Research Intern   *Summer 2015*
· Developed a machine learning method for road traffic forecasting supervised by Romain Billot.

ACADEMIC VISITS

Simon Fraser University   Vancouver, Canada
Vision & Media Lab with Greg Mori   *February 2018 - June 2018*
· Worked on video classification from a human-object interactions perspective.

University of Guelph Guelph, Canada
Machine Learning Research Group with Graham Taylor *Summer 2017*
· Developed an attention-based method for recognizing fine-grained human actions.

PUBLICATIONS & PATENTS

Learning Video Representations using Contrastive Bidirectional Transformer
Chen Sun, **Fabien Baradel***, Kevin Murphy and Cordelia Schmid.*
Under review, arXiv preprint:1906.05743, 2020.

CoPhy: Counterfactual Learning of Physical Dynamics
Fabien Baradel*, Natalia Neverova, Julien Mille, Greg Mori and Christian Wolf.*
In Internattonal Conference in Representation Learning (ICLR), 2020. **(spotlight presentation)**

Object Level Visual Reasoning in Videos
Fabien Baradel*, Natalia Neverova, Christian Wolf, Julien Mille and Greg Mori*
In IEEE European Conference on Computer Vision (ECCV), 2018.

Human Activity Recognition with Pose-driven Attention to RGB
Fabien Baradel*, Christian Wolf and Julien Mille*
In British Machine Vision Conference (BMVC), 2018.

Glimpse Clouds: Human Activity Recognition from Unstructured Feature Points
Fabien Baradel*, Christian Wolf, Julien Mille and Graham Taylor*
In IEEE Computer Vision and Patter Recognition (CVPR), 2018.

Human Action Recognition: Pose-based Attention draws focus to Hands
Fabien Baradel*, Christian Wolf and Julien Mille*
In IEEE International Conference on Computer Vision (ICCV), Workshop "Hands in Action", 2017.

Discrepancy-based networks for unsupervised domain adaptation: a comparative study
Gabriela Csurka, **Fabien Baradel***, Boris Chidlovskii and Stéphane Clinchant*
In IEEE Internat. Conf. on Comp. Vision (ICCV), Workshop "Task-CV", 2017.

Conditional adaptation network for image classification
Fabien Baradel*, Boris Chidlovskii and Gabriela Csurka*
US Patent - 15450620, 2017.

TEACHING EXPERIENCE

Science-U Lyon, France
Lecturer *2018 - 2019*
· "Introduction to machine leaning", MSc Computer Science, 30h

University Lyon 1 Lyon, France
Teaching Assistant *Fall 2017*
· "Regression modeling" - MSc Data Science - TP 12h
· "Probability & Statistics", BSc Computer Science & Maths, TP 20h

EPITA Lyon, France
Lecturer *Fall 2017*
· "Mathematics", Undergraduates, 24h

ENSAI Rennes, France
External Speaker *January 2017*

· "Introduction to deep learning with tensorflow", MSc Data Science, 6h

TALKS

Counterfactual learning for physical dynamics
Invited talk at ICML 2020 workshop Object-Oriented Perception, Reasoning, and Causality.   *July 2020*

Visual reasoning in videos
GDR ISIS-IA on Reasoning from Visual Signal.   *October 2018*

Pose and attention for action recogniton
GDR ISIS on Pose and Gesture.   *December 2017*

MISCELLANEOUS

Press coverage	CVPR Daily 2018.
Reviewer	ECCV 2020, CVPR 2019-2020, ICCV 2019, ICML 2019, FG 2019, NIPS 2018, IJCV.
Summer schools	DLRLSS 2017, PAISS 2019.
Programming	Python, PyTorch, Tensorflow, R, Java, latex, git, bash.
Github	github.com/fabienbaradel
Languages	French (native), English (professional proficiency).
Sports	Ski-touring, hiking, triathlon.