

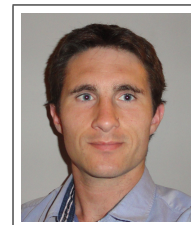
# Paul Gay

Green AI UPPA & indexation  
multimédia

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French (mother tongue), Spanish,  
Italian, English



<https://paulgay.github.io>

## Education

- 2011 - 2014 **Phd thesis: Audiovisual person indexing in broadcast news.**  
**Context:** news content understanding projects EUMSSI and REPERE campaign  
**Key words:** Conditional random fields, face and speaker identification and clustering  
**Advisors:** Sylvain Meignier, LIUM laboratory (Le Mans, France) et Jean-Marc Odobez, IDIAP Research Institute (Martigny, Suisse).
- 2011 **Master degree of electrical engineering: Information System Architectures (ASI), Institut National des Sciences Appliquées (INSA), Rouen, France.**
- 2011 **Master degree: Multimedia Information Processing System (STIM), Université de Rouen, France.**

## Projects and positions in chronological order

- Since 2022 **Research Engineer, CNRS, LISN laboratory, Orsay, France.**  
- Estimation of the Environmental impact of an AI data center.
- 2020-2023 **Teaching assistant, Cytech school, Pau, France.**  
- Master classes : Deep learning and a bit of C++.
- 2021 - 2022 **Research Engineer, Université de Pau et des pays de l'adour., Pau, France.**  
- Embedded IA and energy consumption.  
- Environmental applications of IA (Social computing, Crisis management, Visual Fish detection)
- 2018- 2021 **Machine learning Engineer, LumenAI, Pau, France.**  
- Document indexing, named entity recognition.  
- Clustering on temporal graphs, Graph neural networks.
- 2016- 2018 **Post-Doc, Istituto italiano di tecnologia, VGM group, Genova, Italy.**  
- Combination of Graphical models and deep learning technique.  
- Relationship detection, 3D reconstruction
- 2014- 2015 **ATER, Laboratoire Informatique d'Avignon, Avignon, France.**  
- Teaching assistant (ATER). Various classes in computer sciences: programming, distributed architectures.

## Machine learning skills.

<b>Data science</b>	Bayesian models, matrix factorisation, linear programming.		
<b>Deep learning</b>	Graph neural networks, CNNs, Transformers.		
<b>Vision</b>	Object Detection/Tracking, SfM.	<b>Graphs</b>	Spectral clustering, Louvain
<b>NLP</b>	Word2vec, Transformers, NER.	<b>Audio</b>	Speaker diarization.

## Programming

- Tools: Tensorflow, Pytorch, Spacy, OpenCV, Linux, Git.
- Languages: Python, Java, C/C++, Matlab.      Web: Web services Tornado, flask, Django.

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## Selected publication

These publication are from my phd and postdoc times. My work with the LumenAI start-up and as a research engineer have not been published.

- ACCV 2018 **Visual Graphs from Motion (VGfM): Scene understanding with object geometry reasoning**, *Paul Gay, Stuart James, Alessio Del Bue.*, IEEE Asian conference in computer vision.
- ICCV 2017 **Probabilistic Structure from Motion with Objects**, *Paul Gay, Vaibhav Bansal, Cosimo Rubino, Alessio Del Bue.*, IEEE International Conference on Computer Vision.
- ICASSP 2014 **A conditional random field approach for audio-visual people diarization**, *Paul Gay, Elie Khoury, Sylvain Meignier, Jean-Marc Odobez.*, IEEE International Conference on Acoustics, Speech, and Signap Processing.
- INTERSPEECH 2013 **An Open-source State-of-the-art Toolbox for Broadcast News Diarization**, *Mickaël Rouvier, Grégor Dupuy, Paul Gay, Elie Khoury, Teva Merlin and Sylvain Meignier*, International Speech Communication Association.

Profil Google scholar:

<https://scholar.google.fr/citations?user=TwBT4HEAAAAJ&hl>