

# Emanuele Sansone

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## Summary

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A specialised engineer in the field of machine learning and passionate about work making contribution towards general artificial intelligence. My research focuses on understanding the principles enabling sample efficient and robust learning, working mainly on unsupervised and representation learning.

Along with artificial intelligence and research, I share a passion for the world of sport. I am an experienced ski instructor with international ski racing background. Since 2007, I've been coaching several local Italian racing ski teams and hold several ski instructor courses. In 2011, I've obtained the diploma of ski master instructor, the highest professional Italian degree in alpine skiing, which allows me to train and coach aspiring future skiing instructors.

## Work Professional Experience

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2018-to date	<b>Research Scientist</b> <i>Huawei Technologies R&amp;D, London, UK</i> Working in the area of deep generative models and causal inference.
2018-to date	<b>Reviewer</b> Serving as a reviewer for international journals in the area of machine learning and signal processing, such as IEEE Transactions of Neural Networks and Learning Systems and IEEE Transactions on Image Processing.

## Academic Experience

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2016	<b>Teaching Assistant, Computer Vision (Code 140266)</b> <i>M.Sc. in Telecommunications Engineering, University of Trento, Italy</i> Machine Learning for Computer Vision (introduction to statistical learning theory and neural networks).
2015	<b>Teaching Assistant, Multimedia Networking (Code 140151)</b> <i>M.Sc. in Telecommunications Engineering, University of Trento, Italy</i> Principles of video compression/coding (useful for transmission/storage of video files).
2015-2016	<b>Research Intern</b> <i>LAMDA group, Nanjing University, China</i> Advisor: Prof. Zhi-Hua Zhou. I've studied semi-supervised learning as well as positive unlabeled learning.

## Sport Professional Experience

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2011-to date	<b>Ski master instructor</b> <i>Italy</i> Holding several professional education and training courses for ski instructors and candidate ski instructors. This is the highest professional degree in alpine skiing ( <a href="#">the total number of ski master instructors in Italy is around 200</a> ).
2007-2017	<b>Ski coach</b> <i>Italy</i> Coach of young athletes (6-20 years old) in several racing ski teams: Ski Team Sopramonte (2007/2008), Sci Club Padova (2008/2009), Sci Club Panarotta (2009-2011), Ski Team Paganella (2013/2014), Campiglio Ski Team (2016/2017).
2002-2007	<b>Ski athlete</b> <i>Italy</i> See a <a href="#">sample list of records</a> .

## Education

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2013-2018	<p>Ph.D. <i>ICT doctoral school, University of Trento, Italy</i> Thesis: "<a href="#">Towards Uncovering the True Use of Unlabeled Data in Machine Learning</a>" Advisor: Prof. Francesco G.B. De Natale. Dissertation in multiple areas of machine learning, including semi-supervised, positive unlabeled and unsupervised representation learning.</p>
2011-2012	<p>M.Sc. in Telecommunications Engineering University of Trento, Italy Thesis: "Multimodal Photo Galleries Synchronization" Advisor: Prof. Nicola Conci, Giulia Boato. 110/110 <i>summa cum laude</i>   Gpa: 28.82/30 Computer vision application for automatic synchronization of photo galleries from multiple users attending the same event (C++ language).</p>
2008-2010	<p>B.Sc. in Telecommunications Engineering University of Trento, Italy Thesis: "Master P-NET protocol implementation on PIC 32 architecture" Advisor: Prof. Dario Petri, Eng. Michele Corrà. Programming a master device in a network composed by different sensors and actuators. Implementation of P-NET protocol over a PIC 32 microcontroller (C language).</p>

## Awards and Certificates

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2016	<p>Academic hardware grant award <i>Hong Kong, China</i> Provision of a NVIDIA Titan X GPU Organization: <a href="#">NVIDIA corporation</a></p>
2015	<p>Machine Learning Summer School <i>Austin, USA</i> Certificate of attendance Organization: <a href="#">University of Texas at Austin</a></p>
2012	<p>Merit award <i>Trento, Italy</i> Award assigned to distinguished students Organization: University of Trento</p>
2011	<p>Ski master instructor <i>Milan, Italy</i> Certificate Organization: <a href="#">FISI, CoScuMa</a></p>
2011	<p>Ski coach (3° level) <i>Milan, Italy</i> Certificate Organization: <a href="#">FISI, STF</a></p>
2007	<p>Ski instructor <i>Trento, Italy</i> Certificate</p>

Organization: [PAT](#)

## Publications

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2019	<a href="#">Coulomb Autoencoders</a> E. Sansone, H. T. Ali, S. Jiacheng arXiv pre-print
2018	<a href="#">Towards Uncovering the True Use of Unlabeled Data in Machine Learning</a> E. Sansone PhD Thesis
2018	<a href="#">Efficient Training for Positive Unlabeled Learning</a> E. Sansone, F.G.B De Natale, Z.H. Zhou IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
2017	<a href="#">Training Feedforward Neural Networks with Standard Logistic Activations is Feasible</a> E. Sansone, F.G.B. De Natale arXiv pre-print
2017	<a href="#">Automatic Synchronization of Multi-User Photo Galleries</a> E. Sansone, K. Apostolidis, N. Conci, G. Boato, V. Mezaris, F.G.B. De Natale IEEE Transactions on Multimedia (TMM)
2016	<a href="#">Classtering: Joint Classification and Clustering with Mixture of Factor Analysers</a> E. Sansone, A. Passerini, F.G.B. De Natale European Conference on Artificial Intelligence (ECAI)
2014	<a href="#">Synchronizing Multi-User Photo Galleries with MRF</a> E. Sansone, G. Boato, MS. Dao MediaEval Workshop
2013	<a href="#">Event Clustering and Classification from Social Media: Watershed-based and Kernel Methods</a> TV. Nguyen, MS. Dao, R. Mattivi, E. Sansone, F.G.B. De Natale, G. Boato MediaEval Workshop

## Languages

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Italian:	Mothertongue
English:	Fluent (C2)
German:	Fluent (B2)

## Interests

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Volunteering	From 2012 to 2014, I've participated to a no-profit association, <a href="#">GiPro</a> , composed by young representatives of different sectors (e.g. ski instructors, engineers, lawyers, psychologists). The goal of the association is to promote the professional categories on the territory and stimulate the inter-professional collaboration of young people.
Others	I like playing soccer, alpine excursions.

## References

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UPON REQUEST