

Mehdi Mirza

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Education

Ph.D in Computer Science September 2011 – Present
University of Montreal, Advised by Yoshua Bengio

Visiting student January 2010 – January 2011
Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology,
Advised by James DiCarlo and Nicolas Pinto

M.Sc. in Artificial Intelligence September 2008 – September 2009
Universitat de Barcelona - Universitat Politècnica de Catalunya, Advised by Sergio
Escalera

B.Sc. in Physics September 2001-February 2008
Sharif University of Technology

Publications

Theano: A Python framework for fast computation of mathematical expressions, The Theano Development Team, arXiv:1605.02688

Asynchronous Methods for Deep Reinforcement Learning, Volodymyr Mnih, Adrià Puigdomènech Badia, Mehdi Mirza, Alex Graves, Timothy P. Lillicrap, Tim Harley, David Silver, Koray Kavukcuoglu, ICML 2016

Conditional Generative Adversarial Nets, Mehdi Mirza, Simon Osindero, Deep Learning Workshop NIPS 2014

Generative Adversarial Networks, Ian J Goodfellow, Jean Pouget-Abadie, Mehdi Mirza, Bing Xu, David Warde-Farley, Sherjil Ozair, Aaron Courville, Yoshua Bengio NIPS 2014

An Empirical Investigation of Catastrophic Forgetting in Gradient-Based Neural Networks, IJ Goodfellow, M Mirza, X Da, A Courville, Y Bengio, ICLR 2014

Multi-prediction deep Boltzmann machines, Ian J. Goodfellow, Mehdi Mirza, Aaron Courville, and Yoshua Bengio, NIPS 2013

Combining modality specific deep neural networks for emotion recognition in video, Samira Ebrahimi Kahou, Christopher Pal, Xavier Bouthillier, Pierre Froumenty, Çağlar Gülçehre, Roland Memisevic, Pascal Vincent, Aaron Courville, Yoshua Bengio, Raul Chandias Ferrari, Mehdi Mirza, Sébastien Jean, Pierre-Luc Carrier, Yann Dauphin, Nicolas Boulanger-Lewandowski, Abhishek Aggarwal, Jeremie Zumer, Pascal Lamblin, Jean-Philippe Raymond, Guillaume Desjardins, Razvan Pascanu, David Warde-Farley, Atousa Torabi, Arjun Sharma, Emmanuel Bengio, Kishore Reddy Konda, Zhenzhou Wu, ICMI 2013

Pylearn2: a machine learning research library. Ian J Goodfellow, David Warde-Farley, Pascal Lamblin, Vincent Dumoulin, Mehdi Mirza, Razvan Pascanu, James Bergstra, Frédéric Bastien, Yoshua Bengio. arXiv:1308.4214

Challenges in Representation Learning: A report on three machine learning contests. Ian J Goodfellow, Dumitru Erhan, Pierre Luc Carrier, Aaron Courville, Mehdi Mirza, Ben Hamner, Will Cukierski, Yichuan Tang, David Thaler, Dong-Hyun Lee, Yingbo Zhou, Chetan Ramaiah, Fangxiang Feng, Ruifan Li, Xiaojie Wang, Dimitris Athanasakis, John Shawe-Taylor, Maxim Milakov, John Park, Radu Ionescu, Marius Popescu, Cristian Grozea, James Bergstra, Jingjing Xie, Lukasz Romaszko, Bing Xu, Zhang Chuang, Yoshua Bengio, International Conference On Neural Information Processing, 2013

Maxout Networks. Ian J. Goodfellow, David Warde-Farley, Mehdi Mirza, Aaron Courville, Yoshua Bengio. International Conference on Machine Learning, 2013

Disentangling factors of variation for facial expression recognition. S Rifai, Y Bengio, A Courville, P Vincent, M Mirza. European Conference of Computer Vision, 2012

Contextual-Guided Bag-Of-Visual-Words Model for Multi-class Object Categorization. Mehdi Mirza-Mohammadi, Sergio Escalera, and Petia Radeva. Conference on Computer Analysis of Images and Patterns, pp. 748-756, 2009 (Oral Presentation)

Ranking Error Correcting Output Codes Output for Class Retrieval Problems. Mehdi Mirza-Mohammadi, Francesco Ciompi, Sergio Escalera, Oriol Pujol and Petia Radeva, Proceedings of the 4th CVC Workshop on the Progress of Research & Development CVCR&D 2009. New Trends and Challenges in Computer Vision, pp. 197-203

Master thesis: Contextual Bag-Of-Visual-Words and ECOC-Rank for Retrieval and Multi-class Object Recognition (Awarded highest grade of the program)

Google Scholar Page: <http://scholar.google.ca/citations?user=c646VbAAAAAJ>

Work and Research Experiences

- LISA lab at University of Montreal September 2011- Present
Active member of emotion recognition project in collaboration with UbiSoft.
Collaborator in Maxout networks, MP-DBM and CDA as listed in the publications.
Contributor to Pylearn2 machine learning library.
- Google DeepMind August 2015 - December 2015
Research Internship.
- Flickr/Yahoo August 2014 - November 2014
Software engineering internship with flickr's vision/deep learning team.
- Ersatz Labs July 2014 - September 2014
Machine learning consultation.
- Atlas wristband September 2013- March 2014
Machine learning consultation for physical activity recognition.
- idiap Research Institute January 2011- August 2011
Research internship working on indoor scene recognition using deep neural convolutional networks.
- DiCarlo lab at MIT January 2010- January 2011
Research in statistical characteristics of good features for object recognition task.
And re-developing some research codes in python to be used in other projects in the lab.
- Undergraduate Thesis 2007-2008
Isolated spoken language classification using Hidden Markov Model.
- ENN Complex 2004-2005
Lead developer in redesigning the whole website in Python. The website was bidding based wholesale platform for industries.
- Hyperoffice 2005-2006

Web-application developer in ColdFusion. Worked in designing timesheet application and improving features in other existing applications.
- Amir Educational Institute 2001-2007
IT consultant and lead developer for their web-applications such as student management and library management systems.

Parsican Engineering and Management Consultant Co

2002-2003

IT consultant, and lead web-application developer for inhouse applications such as timesheet and project management systems.

Skills

Machine learning, Deep Learning, Reinforcement Learning, Computer Vision, Natural Language Processing

Programming languages: Python (Numpy, SciPy, Theano), Lua (Torch)

Less frequently used programming languages: Matlab, Cython, CUDA

Open Source Contributions

Theano: <https://github.com/Theano/Theano>

Pylearn2: <http://deeplearning.net/software/pylearn2/>

Blocks: <https://github.com/mila-udem/blocks>

Github profile: <https://github.com/memimo>

Machine Learning Community Involvements

Reviewer: ICLR, NIPS, ICML, ECML

Spoken Languages

English

Persian

Japanese: Intermediate oral communication

References

References available upon request.