

Achievements

2014	<p>1st place in ImageNet object detection challenge 43.9% mAP, 2x improvement over previous edition, with 10x less weights and 3x deeper</p> <p>1st place in ImageNet classification challenge 6.6% error, 2x improvement over previous edition, results on par with human performance!</p> <p>2nd place in ImageNet object localization challenge with 26.4% error</p> <p>1st place in Dogs vs Cats Kaggle competition with 215 competing teams 1.09% error vs 1.69% for second place, most top entries using OverFeat</p> <p>Robotics paper in the top-10 most cited list over past 5 years in Journal of Field Robotics "Learning long-range vision for autonomous off-road driving", Hadsell, Sermanet et al (2009)</p>
2013	<p>1st place in ImageNet object localization challenge State of the art in ImageNet object detection challenge Released the OverFeat feature extractor, qualified as "Astounding Baseline for Recognition"</p>
2012	<p>State of the art in pedestrian detection and house numbers classification using ConvNets</p>
2011	<p>2nd place in traffic sign recognition challenge with 98.3% accuracy First superhuman accuracy in a computer vision competition along with IDSIA (phase I)</p>

Work Experience

2014	Google Brain , research scientist - Deep learning research	<i>NYC, USA</i>
2013 <i>1 year</i>	Cognical , co-founder and chief scientific officer - Loan default prediction using deep learning	<i>NYC, USA</i>
2012 <i>3 months</i>	Google Brain , research internship - Applied large scale machine learning to object recognition - Produced state of the art performance for StreetView object recognition	<i>Mountain View, CA, USA</i>
2008 - 2013 <i>5 years</i>	New York University , research assistant in deep learning & computer vision - Developed the EBLearn C++ deep learning library and the OverFeat feature extractor - State of the art research in computer vision using convolutional networks in EBLearn / OverFeat - Teaching Assistant for a Machine Learning & Robotics classes (Arduino, 3PI, navigation)	<i>NYC, USA</i>
2008 <i>2 months</i>	Willow Garage , research internship in object recognition for robotics - Used convolutional networks and dimensionality reduction for image classification	<i>Menlo Park, CA, USA</i>
2005 - 2008 <i>3 years</i>	New York University / Net-Scale Technologies , robotics research engineer R&D in off-road autonomous robotics for DARPA LAGR program - Deep learning applied to vision, path planning, dynamics control, stereo/image processing - Designed end-to-end system, developed, optimized and tested real time navigation software	<i>NYC, USA</i>
2005 <i>7 months</i>	SIEMENS Corporate Research , research internship in brain imaging - Conducted research on registration algorithms for <i>diffusion</i> (Magnetic Resonance Imaging)	<i>Princeton, NJ, USA</i>

Education

2008 - 2013	Ph.D. in deep learning and computer vision , New York University Advisor: Yann LeCun	NYC, USA
2006 - 2007	Masters in machine learning, computer vision and robotics , New York University	NYC, USA
2000 - 2005	Masters / Bachelor in computer engineering , <i>with honors</i> , EPITA - Tech lead at 2004 European robotics contest for AI, vision, navigation and 3D simulation	Paris, France

Key publications

Full list on [Google Scholar](#)

Arxiv 2014	Going Deeper with Convolutions Szegedy, Liu, Jia, Sermanet, Reed, Anguelov, Erhan, Vanhoucke, Rabinovich
ICLR 2014	OverFeat: Integrated Recognition, Localization and Detection using Convolutional Networks Sermanet et al, <i>International Conference on Learning Representations</i>
CVPR 2013	Pedestrian Detection with Unsupervised Multi-Stage Feature Learning Sermanet, Kavukcuoglu, Chintala, LeCun, <i>Computer Vision and Pattern Recognition</i>
ICPR 2012	Convolutional Neural Networks Applied to House Numbers Digit Classification Sermanet, Chintala and LeCun, <i>International Conference on Pattern Recognition</i>
IJCNN 2011	Traffic Sign Recognition with Multi-Scale Convolutional Networks Sermanet and LeCun, <i>International Joint Conference on Neural Networks</i>
NIPS 2010	Learning Convolutional Feature Hierarchies for Visual Recognition Kavukcuoglu, Sermanet, et al., <i>Advances in Neural Information Processing Systems</i>
JFR 2009	A Multi-Range Architecture for Collision-Free Off-Road Robot Navigation Sermanet et al., <i>Journal of Field Robotics, Special Issue on LAGR</i>
JFR 2009	Learning Long-Range Vision for Autonomous Off-Road Driving Hadsell, Sermanet et al, <i>Journal of Field Robotics, Special Issue on LAGR</i>
IROS 2008	Mapping and Planning under Uncertainty in Mobile Robots with Long-Range Perception Sermanet et al., <i>Intelligent Robots and Systems</i>

Academic activities

2014	Invited talk at DeepVision CVPR workshop Tutorial on deep learning for vision at CVPR Reviewer for NIPS, NIPS deep learning workshop, ICLR and CVPR DeepVision workshop
2013	Reviewer for NIPS, NIPS deep learning workshop and ICLR
2012	Reviewer for NIPS

Misc

Languages	Fluent in English and French
Hobbies	Kitesurfing, badminton, squash, playing music