Yann N. Dauphin

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WWW: npcontemplation.blogspot.com

Objective I am interested in the development and application of machine learning algorithms that

can learn mostly from unlabeled data.

RESEARCH

Unsupervised learning, deep learning, auto-encoders, boltzmann machines, natural lan-

Interests guage processing, computer vision

EDUCATION Université de Montréal, Montréal, Québec Canada

Ph.D., Computer Science, August 2011 to present

• Advisor: Professor Yoshua Bengio

• Area of Study: Machine Learning

I'm investigating deep learning algorithms for large-scale computer vision and natural language processing.

M.S., Computer Science, August 2010 to August 2011

• Advisor: Professor Yoshua Bengio

• Area of Study: Machine Learning

• GPA: 4.1/4.3

• Transferred to Ph. D.

École Polytechnique de Montréal, Montréal, Québec Canada

B. Eng., Computer Engineering, August 2006 to June 2010

Gained an intimate understanding of modern computer architectures.

PUBLICATIONS

- S. Rifai, Y. Dauphin, P. Vincent, Y. Bengio, X. Muller. The Manifold Tangent Classifier. In: Advances in Neural Information Processing Systems (NIPS 2011).
- Y. Dauphin, X. Glorot, Y. Bengio. Large-Scale Learning of Embeddings with Reconstruction Sampling. In: *Proceedings of the 28th International Conference on Machine Learning (ICML 2011)*.
- S. Rifai, G. Mesnil, P. Vincent, X. Muller, Y. Bengio, Y. Dauphin, X. Glorot. Higher Order Contractive Auto-Encoder. In: *Proceedings of the European Conference on Machine Learning (ECML 2011)*.
- G. Mesnil, Y. Dauphin, X. Glorot, S. Rifai, Y. Bengio, et al. Unsupervised and Transfer Learning Challenge: a Deep Learning approach. In: *Journal of Machine Learning Workshop and Conference Papers (JMLR W&CP 2011)*.

TEACHING EXPERIENCE École Polytechnique de Montréal, Montréal, Québec Canada

Teaching Assistant

September 2007 to September 2009

- Lab Instructor for INF 1995: Computer Engineering Project I
 - Autumn 2007, Autumn 2009
 - Responsible for supervision and grading of 3 hour laboratory where first-year undergraduate students build and program a robot.

- Lab Instructor for INF 1600: Architecture of micro-computers
 - Autumn 2009
 - Responsible for writing, supervision and grading of 3 hour laboratory where first-year undergraduate students learn about the design of micro-processors and the assembly language.
- Assistant Lab Instructor for INF 2990: Computer Engineering Project II
 - Autumn 2008
 - Responsible for 3 hour laboratory where sophomore undergraduate students learn how to make a 3D game.

Professional Experience

Ericsson, Montréal, Québec Canada

 $R \mathcal{E}D$ Intern for developper tools

May 2009 to August 2009

- Part of a team to integrate the Linux Trace Toolkit into the Eclipse IDE.
- Designed an implemented part of the user interface.
- Designed an automatic test suite for the user interface.

Soltic, Montréal, Québec Canada

Developper and Founding Member

January 2009 to December 2009

- Development of a screen-based information diffusion system.
- Sold license to Collège Regina Assumpta.

Lambda Tree Media, Montréal, Québec Canada

Co-Founder

May 2008 to January 2009

- We wanted to make a good dating site for people in their forties.
- Design and implementation of the website.

VerkkoStadi Technologies, Montréal, Québec Canada

Developper for handwriting recognition system May 2007 to August 2007

 Designed and implemented an handwriting recognition system using convolutional networks.

SERVICE

Contributor to several open-source software projects, including:

- GNU CLisp, one of the top Lisp compilers
- JGAP, a popular library for implementing Genetic Algorithms
- SWTBot, a UI testing tool

Computer Science Games, 2010

- Vice-President in charge of competitions for this annual north-american computer science competition.
- Budget of over 50 000\$ with over 300 participants.

HARDWARE AND SOFTWARE SKILLS

Computer Programming:

• C, C++, Python, Java, Assembly (x86), Scheme, JavaScript, Lisp, GNU make, SQL and others

Analog and Digital Electronics:

- Implementation of digital circuits on FPGA.
- Design and building of analog circuits (e.g., filters).
- Computer-Aided Design Tools: Cadence OrCAD, SPICE, Xilinx Studio

Embedded and Real-time Systems:

- Programming micro-controllers (e.g., Atmel ATmega 16)
- Programming for the embedded and real-time μ -C operating system.

Information/Internet Technology:

- Networking (UDP, TCP), Services (Apache, MySQL, Nginx)
- Design and implementation of web sites

Operating Systems:

• Apple OS X, Linux, Microsoft Windows

REFERENCES AVAILABLE TO CONTACT

Dr. Yoshua Bengio (e-mail: yoshua.bengio@umontreal.ca; phone: (514) 343 6804)

- Professor, Département d'informatique et de recherche opérationnelle, Université de Montréal
- ♦ P.O. Box 6128, Centre-Ville Branch Montréal (QC), H3C 3J7, Canada
- * Dr. Bengio is my graduate advisor.