EMMANUEL BENGIO
School of Computer Science
McGill University

Education

2009-2011 CÉGEP DE BOIS-DE-BOULOGNE
Diploma of College Studies (DEC) in Computer Science and Mathematics

2011-2014 UNIVERSITÉ DE MONTRÉAL
Bachelor of Computer Science, honors

2014- MCGILL UNIVERSITY
Masters in Computer Science
Advisor: Joelle Pineau

Publications

2013 Combining Modality Specific Deep Neural Networks for Emotion Recognition in Video, S. Ebrahimi et al, 2013, Emotion Recognition In The Wild Challenge and Workshop (EmotiW 2013)

Interests

Machine Learning, deep learning and reinforcement learning
Compilation, design and implementation of programming languages
Video game programming, computer graphics

Music, guitar improvisation and composition

Internships and research projects

Summer 2010

Internship at Laboratoire d'Informatique des Systèmes Adaptatifs (LISA), Université de Montréal
Exploration of sparse *artificial neural networks models for compression of 3D animation skeletons.*
In partnership with Ubisoft, we have developped specific architectures in order to compress 3D skeletal animation data. These models can learn a sparse representation of animations, of high dimension but very compressable because mostly made of zeros. These models also learn to reconstruct animations from these representations with minimal loss.

Summers 2011-12

Intership at LISA, Université de Montréal
Exploration of convolutional artificial neural networks for detection of emotions in images of human faces.
We have explored a convolutional architecture, inspired from the visual cortex, for a vision task that consists of classifying images of human faces to retreive the associated emotion. We have mostly explored various ways of training this model, notably using phases of unsupervised learning of representations, that allow for better classification.

Summer 2013

Research internship at Laboratoire de Traitement Paralèlle, Université de Montréal

Developpement of a new lexical analysis approach based on statistical and low-level optimisations, notably to improve branch prediction.

We have developped a lexical analysis generator, that uses statistical analysis of corpus of language samples to optimise generated lexing code, using optimisations such as intelligent branch orderding and targeted register allocation. These optimisations allow us to go faster than state-of-the-art lexical generator tools.

Distinctions

2011-2014 Entry scholarship, Département d'Informatique et Recherche Opérationelle

2012, 2013, 2014
Palmarès du Doyen de la Faculté des Arts et Sciences

Summer 2013
Undergraduate Student Research Awards, CRSNG

2013 *Bourse d'excellence académique* Abilis, Solutions Abilis

2014-2015 NSERC Canada Graduate Scholarship - Master's Program

Implication

Association générale des étudiants de Bois-de-Boulogne (AGEBdeB)

2009-2011 Coordinator of the *Coda*, music comitee of Bois-de-Boulogne

Association des étudiants du Département d'informatique et de recherche opérationelle de l'Université de Montréal (AÉDIROUM)

2012-2013 2nd year student representative

2013-2014 3rd year student representative

Computer Science Games, Université de Montréal team

The CSGames is an annual computer science competition that attracts over 30 teams (7 to 10 students) of north american undergraduate students.

2012 Third place in "Extreme Programming"

2013 Second place in "Extreme Programming"

2014 Second place in "Corporate Challenge - CGI Group"