

Félix G. Harvey

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Education

Polytechnique Montréal <i>PhD in Deep Learning</i> Starting May 2016	Montreal 2016–Now
Polytechnique Montréal <i>MSc in Deep Learning</i> Accepted in April 2016 to a direct entry to the PhD degree (GPA: 4.0/4.0)	Montreal 2014–2016
Polytechnique Montréal <i>BSc in software engineering</i> Graduated with distinction in Multimedia orientation (GPA: 3.55/4.0)	Montreal 2009–2014

Work Experience

Vocational.....

Polytechnique Montréal <i>Teaching assistant - Advanced Computer Graphics (INF8702)</i>	Longueuil Fall 2014
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- Presentation and explanations of weekly laboratories
- Assistance of students with technical questions

Radio-IP <i>Intern developer</i>	Longueuil Summer 2013
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- Implementation of information sharing between native and Android layers through protocol buffers
- Research and Development (prototyping of a network using a Foreign Agent)

Radio-IP <i>Intern developer</i>	Longueuil Summer 2012
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- Linux client migration to Android 4
- Graphical user interfaces and functionalities development for Android smartphones and tablets

Radio-IP <i>Intern developer</i>	Longueuil Fall 2011
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- Development of an automatic build and packaging process for various company products

Miscellaneous.....

Camp de jour Champfleury <i>Day camp counselor</i>	Laval Summers 2009-2011
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Youtube (Google) <i>Youtube partner</i>	Montreal 2011–now
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- Creation of 2D flash animations (last animation uploaded in 2011)
- Creation of enjoyable, popular content (52 000+ subscribers, 54 000 000+ views)

Languages

French: Mother tongue

English: Fluent

Computer skills

Languages: Python, C++, C#, Java, OpenGL

Fields: Deep Learning, 3D Programming, Virtual Reality

Most commonly used tools: Anaconda Scientific Python Distribution + Theano, Unity3D

Projects

MSc. in Deep Learning

Application of deep learning techniques on motion capture sequences

Fall 2014–Now

○ Main research aspects:

- Sequence feature learning with recurrent encoder-decoders;
- Regularization with combined reconstructive and discriminative objective functions;
- Motion capture movements' clustering and feature visualization;
- [Semi-supervised Learning with Encoder-Decoder Recurrent Neural Networks.](#)

MuVR

Real-time 3D music visualizer with Oculus Rift

May 2015

○ Main achievements:

- Brought the main idea for the experiment;
- Implemented most frequency-based behaviors of the 3D environment.

Air instruments

Interactive 3D game for music enthusiasts without any controller or instrument

Winter 2014

○ Main achievements:

- Brought the main idea for the project;
- Implemented most of music-related technicalities;
- Implemented assisted-mode for drums;
- Placed second at Laval Virtual 2014 (France).

○ *Radio-Canada* coverage:

- [Imaginary piano + Polytechnic graduates = real notes \(french only\)](#)

Interests

Deep Learning: Representation learning, sequence learning, sequence generation, semi-supervised learning, recurrent neural networks, others

Virtual reality: Oculus Rift, mobile VR, real-time applications, others

Music: Composing, editing, performing