Patrice **Bechard**

Student · M.Sc. Computer Science

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"The only way to do great work is to love what you do."

Education

Université de Montréal
Montréal, Qc, Canada

M.Sc. in Computer Science — *Sep. 2017 - Present*

- 4.2/4.3 GPA.
- Took classes on machine learning, probabilistic graphical models, deep learning and natural language processing.

Université de Montréal
Montréal, Qc, Canada

B.Sc. in Physics — *Sep. 2014 - Apr. 2017*

- Dean's list student. 4.0/4.3 GPA.
- Took multiple classes in computer science and computational physics.

Experience

Option Femmes Emploi
Gatineau, Qc, Canada

IT Technician — *Jun. 2017 - Jul. 2017*

- Network administrator.
- Automated tasks using Python and bash.
- Worked on databases using MS Access and SQL.

Universite de Montréal
Montréal, Qc, Canada

Teaching assistant — *Jan. 2017 - Apr. 2017*

- TA for the special relativity course (PHY1652).
- Helped undergraduate students with their homework and exercices.

Astrophysics Research Center of Quebec
Montréal, Qc, Canada

Research assistant — *May 2016 - Aug. 2016*

- Worked under the supervision of Prof. Pierre Bergeron.
- Received an Undergraduate Student Research Award (USRA) from the NSERC for excellent academic record.
- Made a statically unbiased census of white dwarf stars within a radius of 40pc of the Sun and analyzed their physical proprieties.
- Had multiple telescopic observation nights at the Mont-Mégantic Observatory (OMM).

Honors & Awards

2016 — **Recipient**, Undergraduate Student Research Award (USRA) from the NSERC for excellent academic record. — *Montréal, Qc, Canada*

Presentations

Conférence des stagiaires d'été en physique de l'Université de Montréal 2017
Montréal, Qc, Canada

Presenter for <Network Science> — *Aug. 2017*

- Presented an introduction to real network architecture models, such as the Erdös-Rényi model and the Barabasi-Albert model.
- Showed examples of networks built from real data and how their structure was related to theoretical models.

Symposium-SAPHARI 2018 *Montréal, Qc, Canada*

Presenter for <classification of stars according to their absorption spectrum by machine learning> *Mar. 2018*

- Presented the performance of various learning algorithms on the task of classifying stars using their stellar spectra.
- Honorable mention for the *computational physics* category.

Flash-Bac 2018 *Montréal, Qc, Canada*

Presenter for <Deep Learning : Introduction and applications in physics> *Apr. 2018*

- Presented an introduction to various neural networks.
- Presented various recent applications of machine learning and deep learning in physics.
- Award for the best presentation for the Winter 2018 semester.

Committees

2018 **Member**, Perspectives on the social issues of artificial intelligence. *Montréal, Qc, Canada*

Other Important Information

- Native language is french. Full professional proficiency in english.
- Participated in various mathematics, computer science and physics contests, such as the 2011 Michael Smith Challenge (UBC), the American Mathematics Contest 12, the 2014 Canadian Association of Physicists and the 2017 Google Code Jam.
- Knowledge of source control (Git).
- Knowledge of UNIX environments.
- Knowledge of various programming languages (Python, MatLab, C, C++, Fortran77).
- Knowledge of various machine learning and deep learning frameworks (Tensorflow, PyTorch, Keras, Scikit-Learn).
- Volunteer in various events organized by the student association of physics of the Université de Montréal (PHYSUM) as well as the student association federation of the Université de Montréal (FAÉCUM).