MACHINE LEARNING
NON-CREDIT PROGRAM WITH TRANSCRIPT

DESCRIPTION
If you are interested in acquiring essential practical machine learning knowledge and skills, this program is for you.

DATES
July 29 – August 16, 2019 (3 weeks)

COURSES
1. STATISTICAL MACHINE LEARNING (30 HOURS)
This course introduces fundamental statistical machine learning concepts and tools using Python. Emphasis is placed on the following subjects: descriptive statistics, statistical distributions, random number generation, basic data visualization; linear regression; basic classification; error estimation: cross-validation, bias-variance trade-off; shrinkage methods; dimension reduction; beyond linearity: smoothing splines, local regression, additive models; tree and ensemble methods; powerful classifiers; unsupervised learning.

2. PRACTICAL MACHINE LEARNING (35 HOURS)
This course aims to introduce participants to essential machine learning methods and techniques through an end-to-end machine learning project. Emphasis is placed on practical experience with machine learning using Python programming language, scikit-learn and TensorFlow, as well as on understanding classification and training models. The course will provide an introduction to artificial Neural Networks, deep learning, convolutional and recurrent neural nets and reinforcement learning.

These courses are non-credit. Students are assessed and graded. A McGill Record of Study is issued. The language of instruction is English (TOEFL IBT 79 or equivalent). There are no other prerequisites.

PRE-REQUISITES
→ Strong quantitative background
→ Essential programming skills in Python
→ Applicants must be currently enrolled in one of the following programs or hold a degree in:
   → Bachelor of Engineering (B.Eng.)
   → Bachelor of Science (B.Sc.)
   → Bachelor of Commerce in MIS (B.Com MIS)

Students without prior knowledge of Python must complete the following Python courses online and provide proof of completion prior to the start of the program:
Introduction to Python for Data Science course - prior to taking Statistical Machine Learning

FEES
→ Tuition Fees: $2355 CAD
→ Ancillary Fees: $320 CAD
→ Total Program Fees: $2675 CAD (≈ $2025 USD*)
→ Attestation of Completion of Program
→ Orientation session
→ Welcome and Farewell receptions
→ Optional:
   → Accommodation (Double Occupancy): $825 CAD ($625 USD*)
   → Cultural and social activities (Fees to be announced)
→ Not included:
   → Meals

*Invoicing is in Canadian dollars, USD pricing based on the Jan. 10, 2019 rate is for comparative purposes only and is subject to change.