Data science class Lab introduction

September 3

Instructors

- Golnoosh Farnadi

- Kris Sankaran

Teacher assistants

- Dmitriy Serdyuk
- Arian Hosseini
- Pravish Sainath

Teacher assistants

- Dmitriy Serdyuk

Senior PhD student at Mila.

Works with
- Speech recognition
- Spoken language understanding
- Recurrent generative models
- Sequence-to-sequence models

Teacher assistants

- Arian Hosseini

First year PhD student at Mila

Interested in representation learning and reasoning in natural language

Teacher assistants

- Pravish Sainath

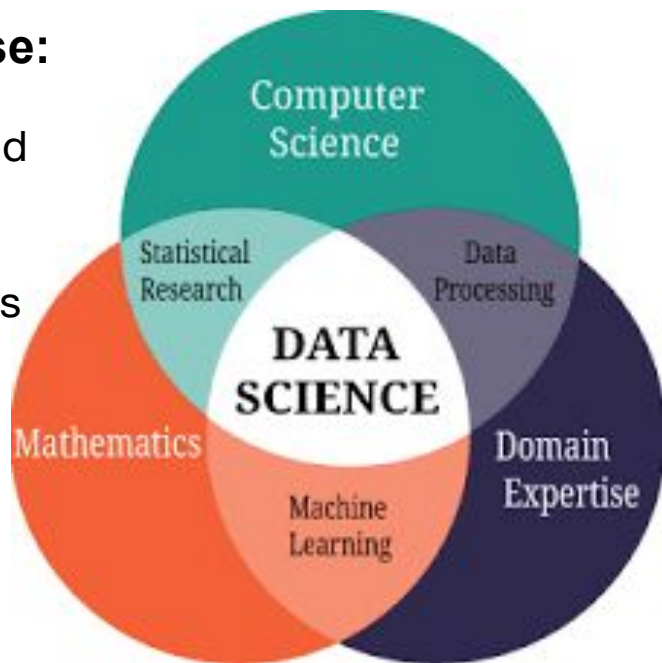Second year Masters student at Mila / UdeM

Recurrent models and neuroscience-inspired deep learning

Class structure

- Class webpage: https://ift6758.github.io/

First part of the course:

- Data transformations and visualization
- Supervised and unsupervised summaries
- Inference and model comparison

Second part of the course:

- Text and image data
- Graph Mining
- Advanced Inference
- Ensembling
- Privacy and explainability

Assignments

Mostly programming assignments related to the theory part

Grade: 25%

Grading with **gradescope: https://www.gradescope.com/**

Class project

facebook

User Profiling in Social Media

Task: Infer users' gender, age, and personality traits

Data: Profile picture (image), status updates (text), page likes (relation)

Grade: 35%

Deliverables: 2 presentations, 1 group report, 1 individual report, and couple of weekly evaluations on the software performance

Fill the Surveys

- Student Introduction Survey, due **September 8**

https://forms.gle/bEjKNMXzuzBeBMxc9

- Team registration**,** due **September 8**

https://forms.gle/793jBEcBh9U57Qp99

Practical labs

- Introduction to Python
- Jupyter, conda, pip
- Numpy & Scipy
- Matplotlib
- Pandas
- Scikit-learn
- Git
- Natural language processing with Python
- Computer vision with Python
- NetworkX/iGraph

Lab assignments

* Optional, will not be graded

- Theory and programming assignments

- Similar questions to the exams

- Solutions will be provided after the lab session

Getting Help

- Office hours: TBA

- Online discussion: http://piazza.com/university_of_montreal/fall2019/ift6758