Bienvenue!

B I E N V E N U E !

GIF-1001 Ordinateurs : Structure et Applications
Audrey Durand (crédit : Jean-François Lalonde)

Mon cheminement

 2004-09
Bacc. en génie informatique

 2009-11
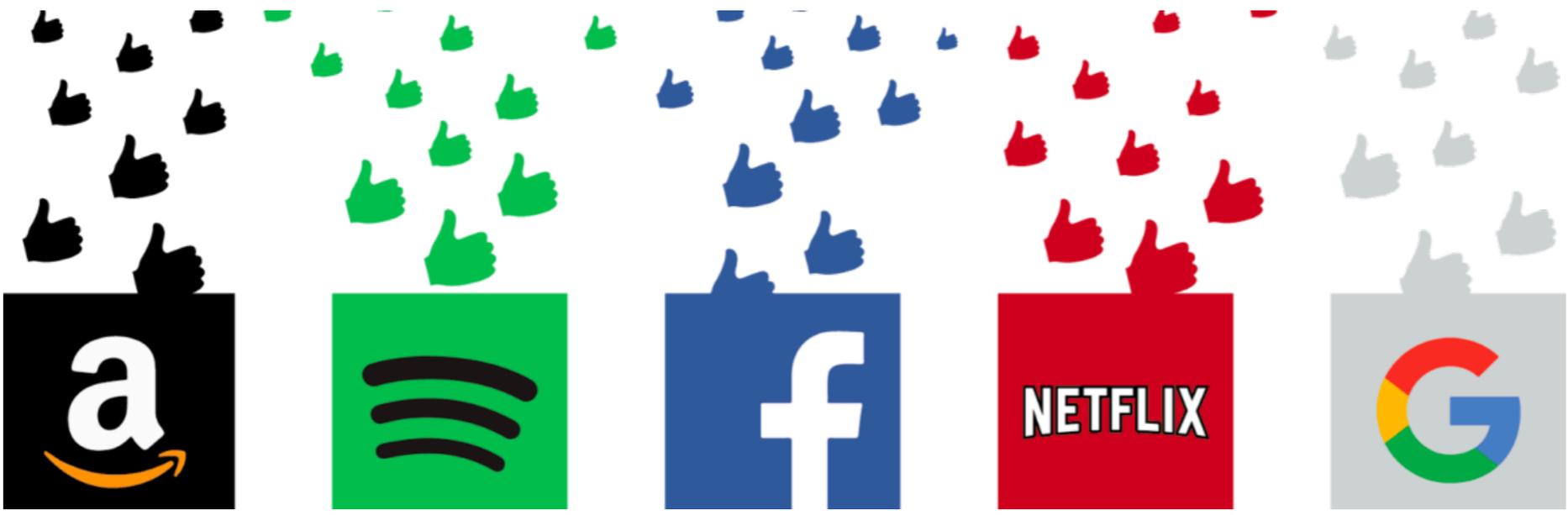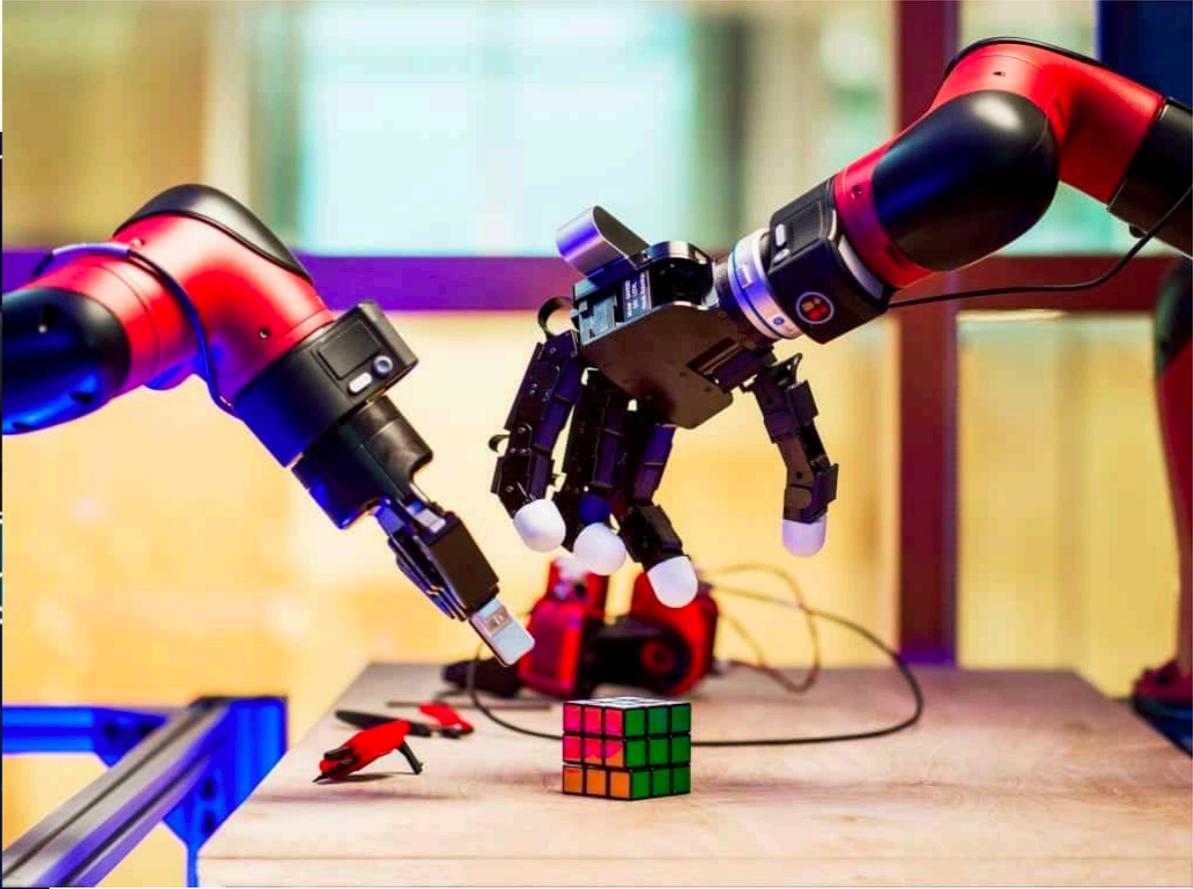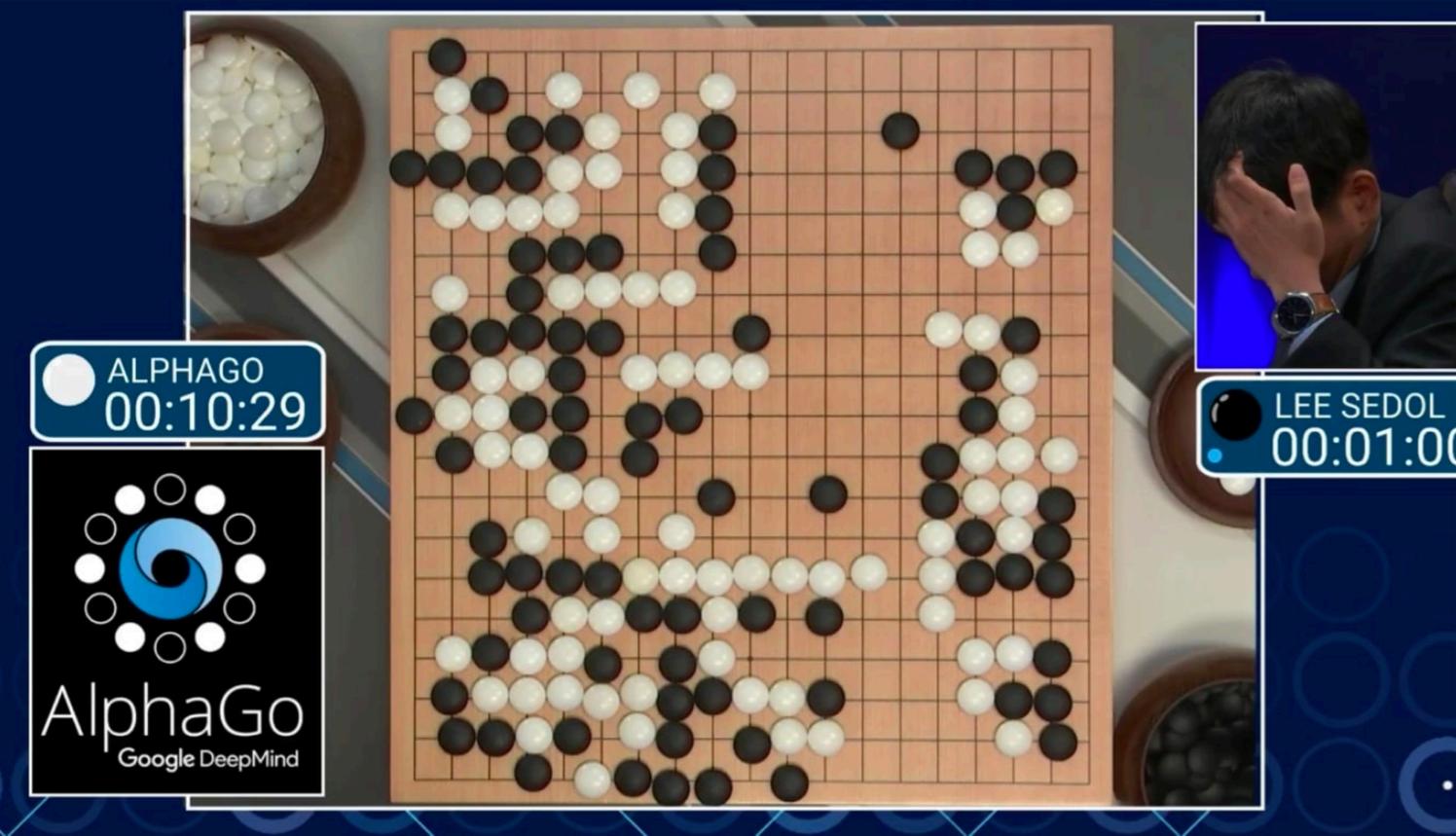M.Sc. en génie électrique (IA)

 2011-18
Ph.D. en génie électrique (IA)

 2017-19
Post-doc

 2019-…
Prof. en IFT-GLO/GEL-GIF

Mon domaine de recherche : Apprentissage par renforcement (RL)

fellow-consulting.com

ALPHAGO
00:10:29

LEE SEDOL
00:01:0(

AlphaGo
Google DeepMind

dimensionless.in

analyticsinsight.net

3

Comparaison avec l'apprentissage supervisé :

Dataset

Algorithme

Chats :   Chiens :

Entraînement $\longrightarrow$
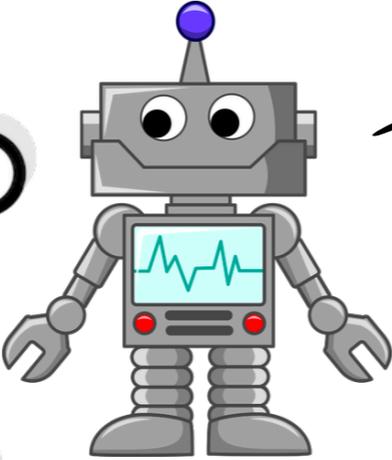

Déploiement $\longrightarrow$

?

VS
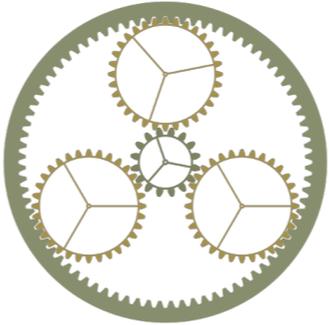
Agent

Action a_t
dans la situation s_t

Environnement

Historique
$$\left\{ \begin{array}{c} s_1, a_1, r_1, s_2 \\ s_2, a_2, r_2, s_3 \\ \vdots \end{array} \right\}$$

Récompense r_t et
nouvelle situation s_{t+1}

Recommandation de traitements
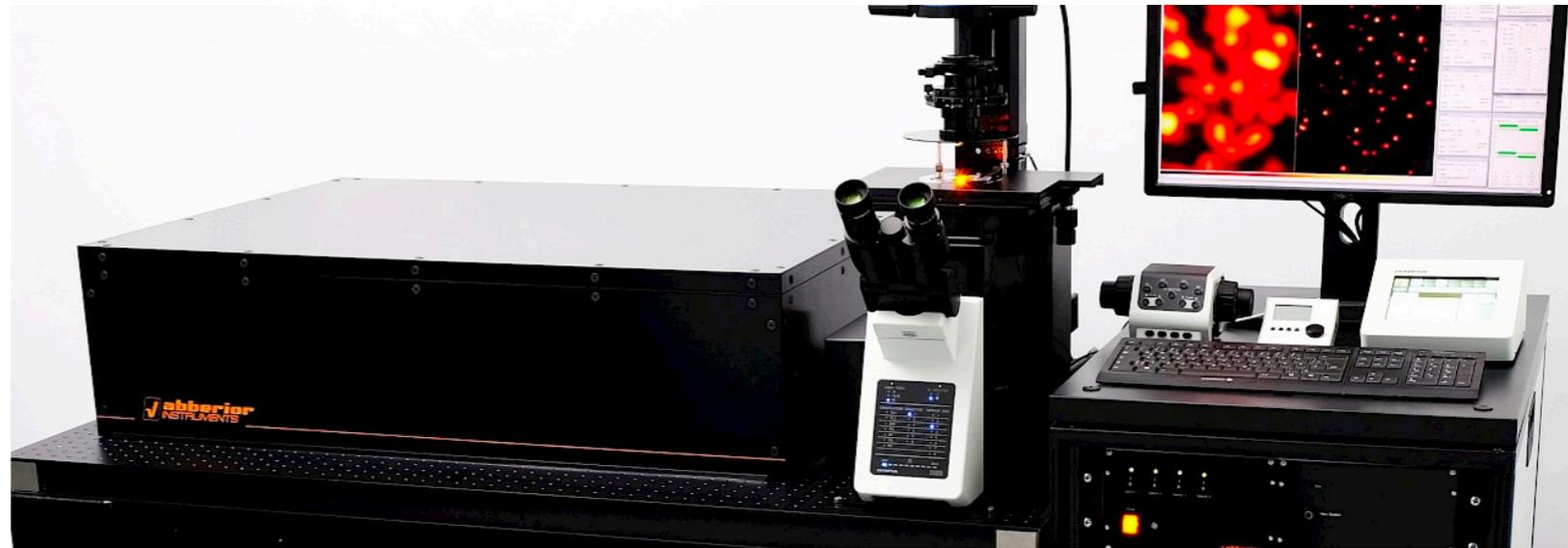

Volume de la tumeur

Traitement
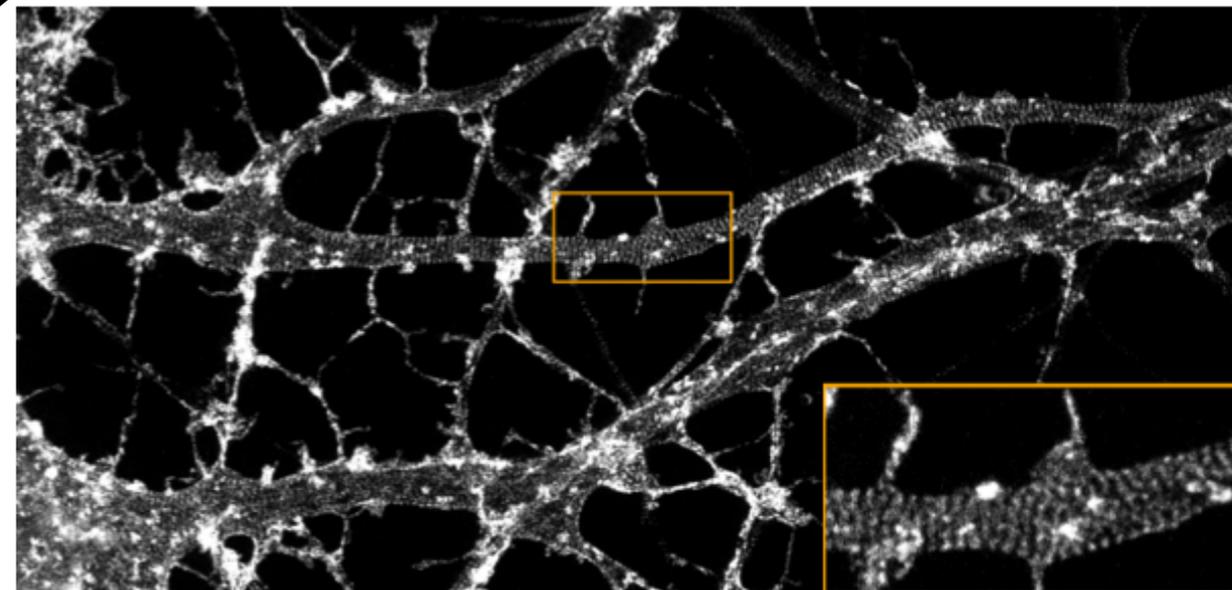
Volume de la tumeur post-traitement
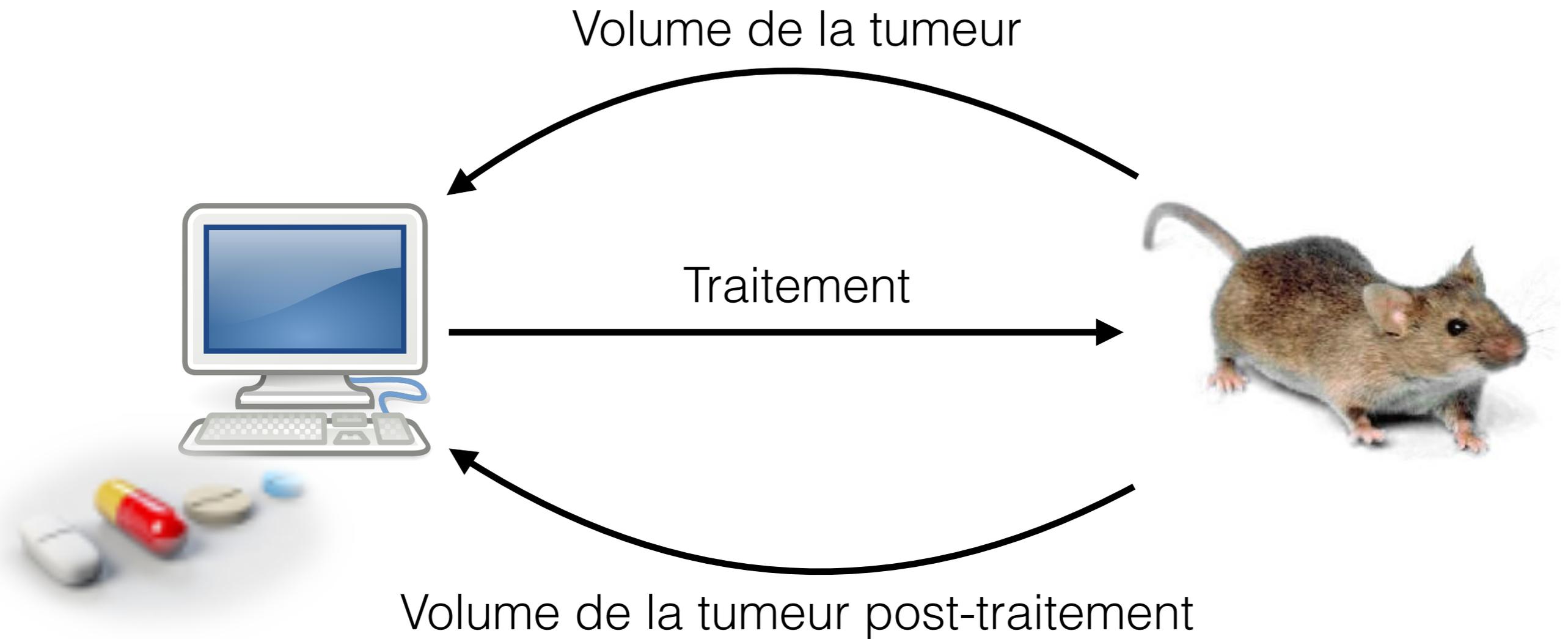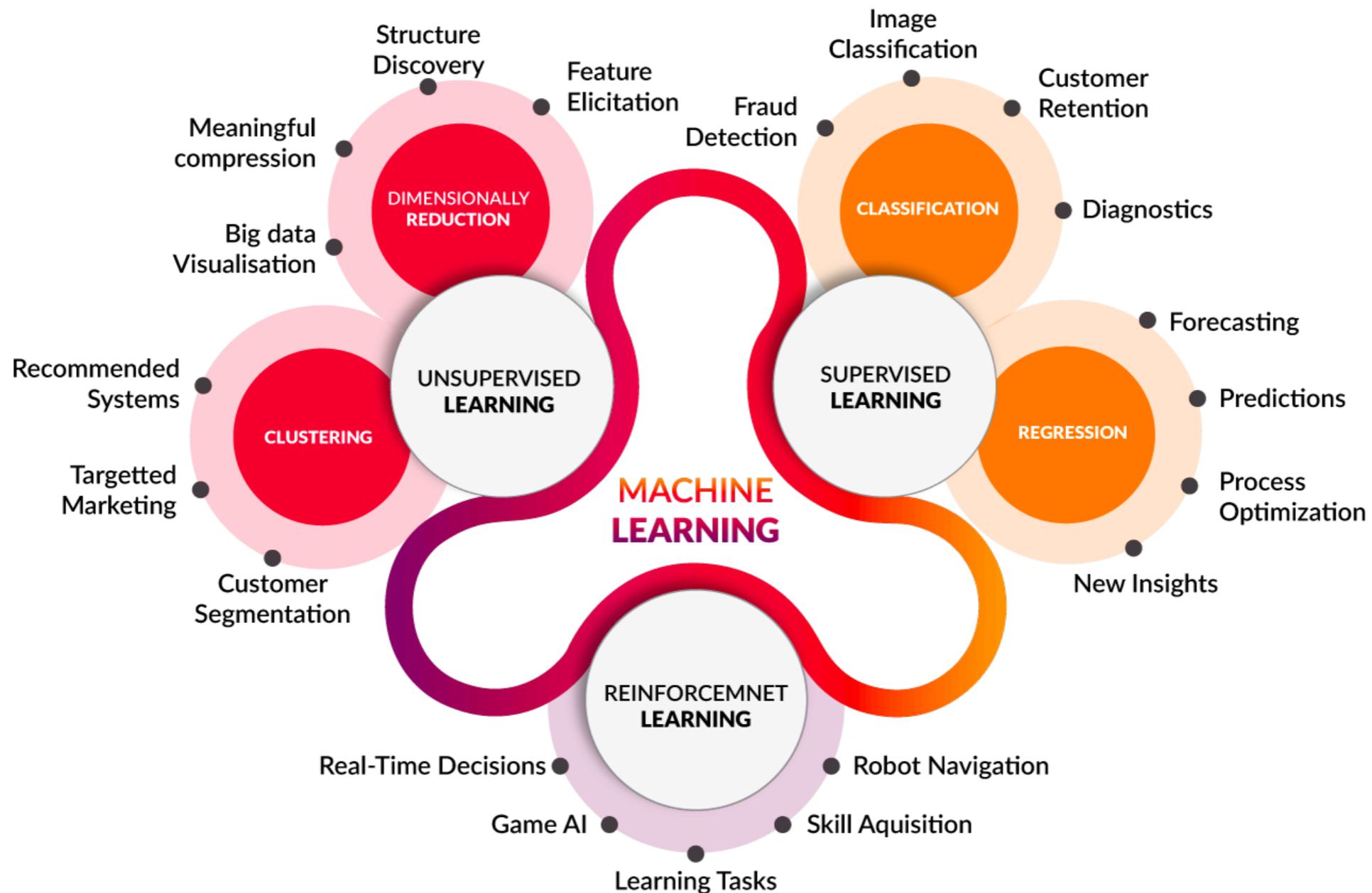
Optimisation d'imagerie microscopique

Paramètres d'imagerie

Qualité de l'image

IFT-4201/7201 Apprentissage par renforcement

Voir les projets des versions A20-A21

Pour plus de détails…
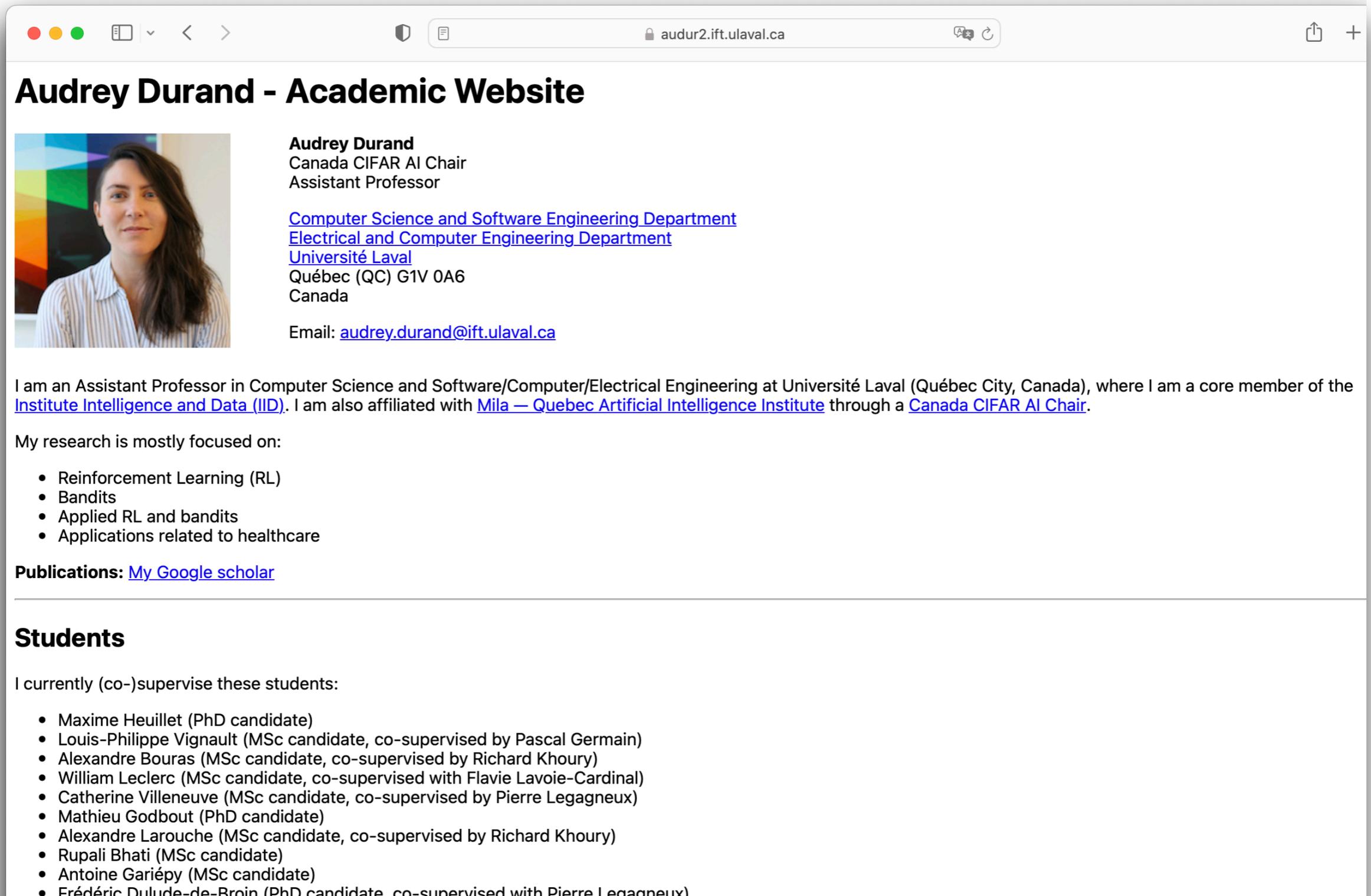
https://audur2.ift.ulaval.ca/

Audrey Durand - Academic Website

Audrey Durand
Canada CIFAR AI Chair
Assistant Professor

Computer Science and Software Engineering Department
Electrical and Computer Engineering Department
Université Laval
Québec (QC) G1V 0A6
Canada

Email: audrey.durand@ift.ulaval.ca

I am an Assistant Professor in Computer Science and Software/Computer/Electrical Engineering at Université Laval (Québec City, Canada), where I am a core member of the Institute Intelligence and Data (IID). I am also affiliated with Mila — Quebec Artificial Intelligence Institute through a Canada CIFAR AI Chair.

My research is mostly focused on:

- Reinforcement Learning (RL)
- Bandits
- Applied RL and bandits
- Applications related to healthcare

Publications: My Google scholar

Students

I currently (co-)supervise these students:

- Maxime Heuillet (PhD candidate)
- Louis-Philippe Vignault (MSc candidate, co-supervised by Pascal Germain)
- Alexandre Bouras (MSc candidate, co-supervised by Richard Khoury)
- William Leclerc (MSc candidate, co-supervised with Flavie Lavoie-Cardinal)
- Catherine Villeneuve (MSc candidate, co-supervised by Pierre Legagneux)
- Mathieu Godbout (PhD candidate)
- Alexandre Larouche (MSc candidate, co-supervised by Richard Khoury)
- Rupali Bhati (MSc candidate)
- Antoine Gariépy (MSc candidate)
- Frédéric Dulude-de-Broin (PhD candidate, co-supervised with Pierre Legagneux)