

Bienvenue!



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

Mon cheminement



UNIVERSITÉ
LAVAL

2004-09

Bacc. en génie informatique



UNIVERSITÉ
LAVAL

2009-11

M.Sc. en génie électrique (IA)



UNIVERSITÉ
LAVAL

2011-18

Ph.D. en génie électrique (IA)



McGill

2017-19

Post-doc  **Mila**

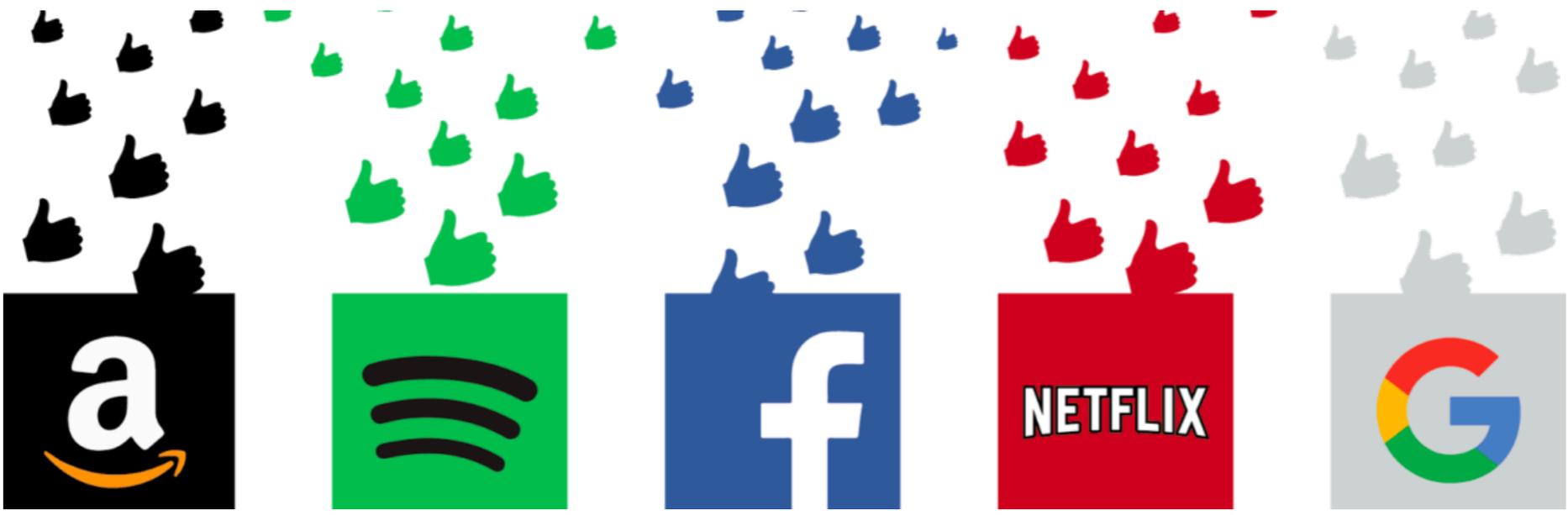


UNIVERSITÉ
LAVAL

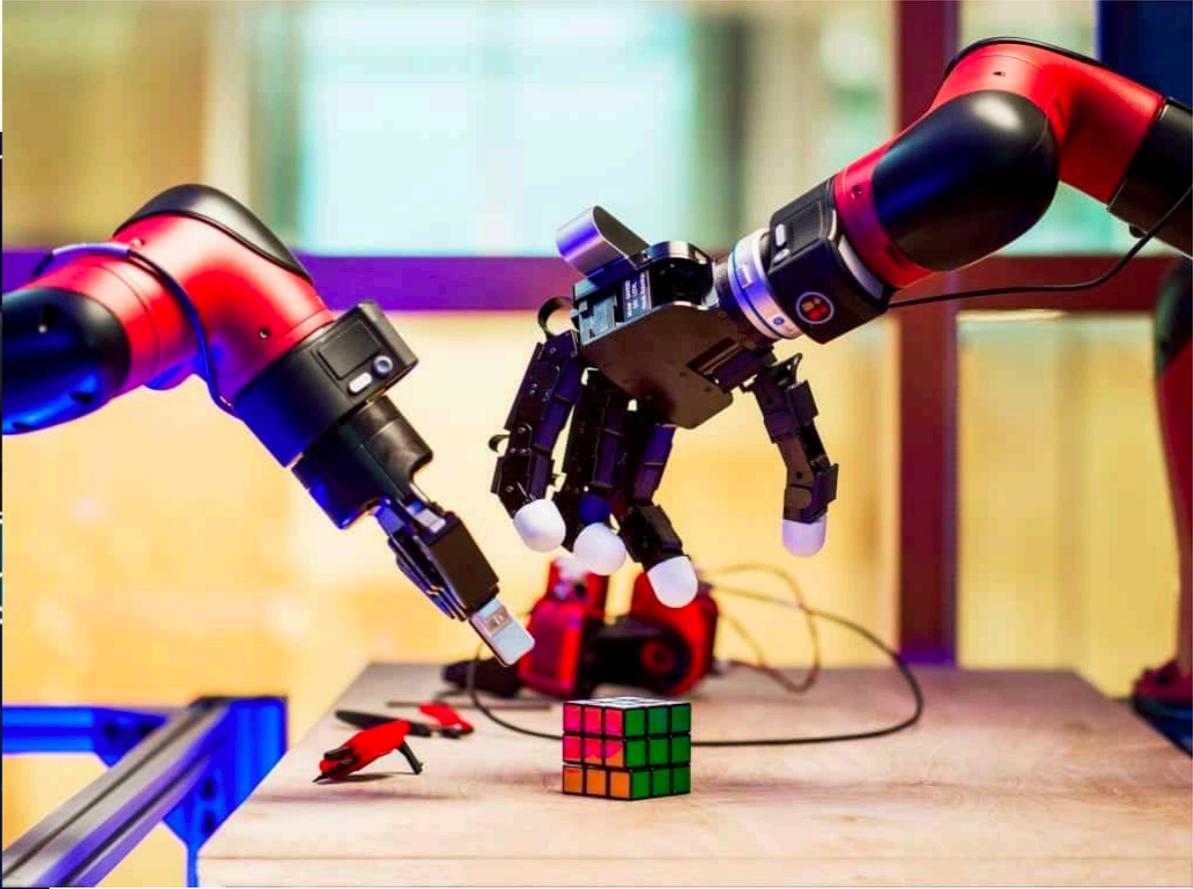
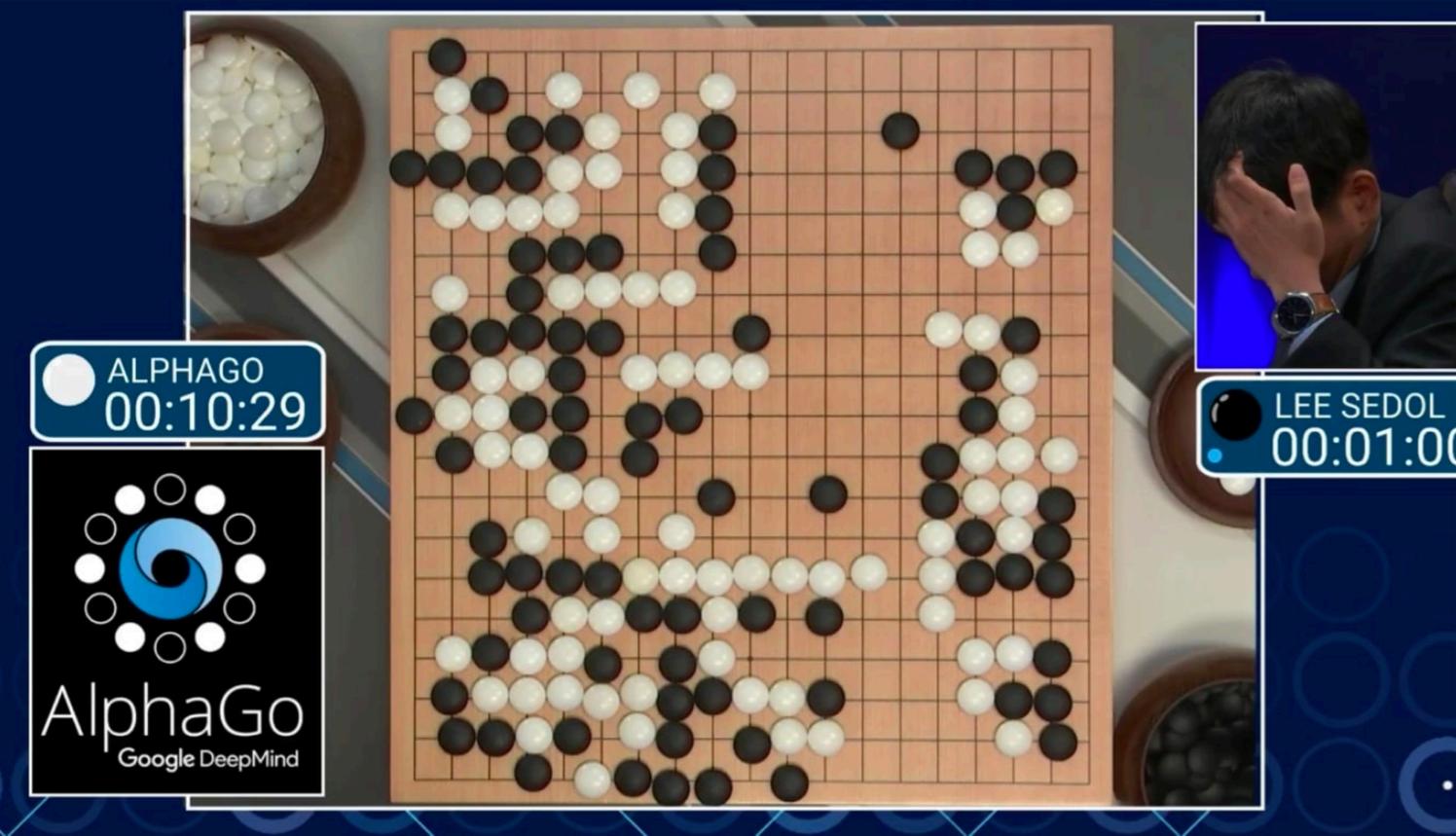
2019-...

Prof. en IFT-GLO/GEL-GIF  **Mila**

Mon domaine de recherche : Apprentissage par renforcement (RL)



fellow-consulting.com



analyticsinsight.net

Comparaison avec l'apprentissage supervisé :

Dataset

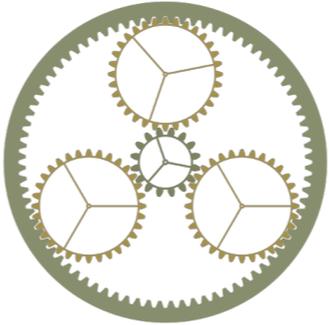
Algorithme

Chats :

Chiens :



Entraînement



Déploiement

?

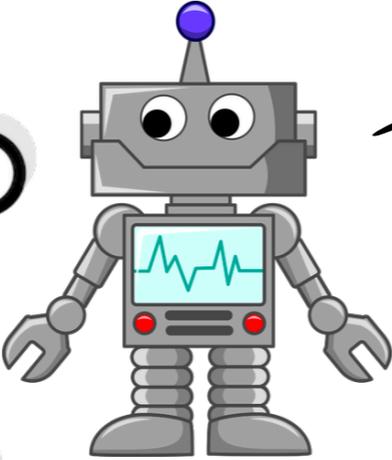


VS

Action a_t
dans la situation s_t

Environnement

Agent

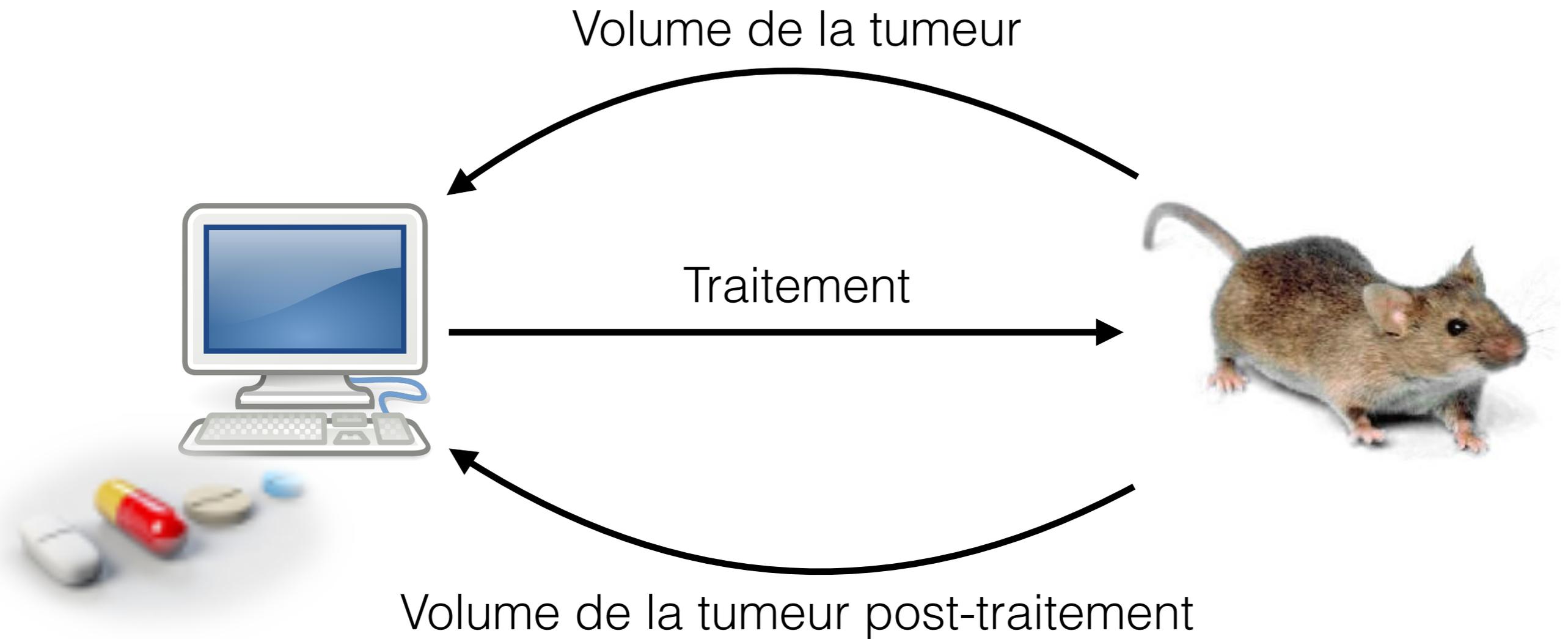


Récompense r_t et
nouvelle situation s_{t+1}

Historique

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

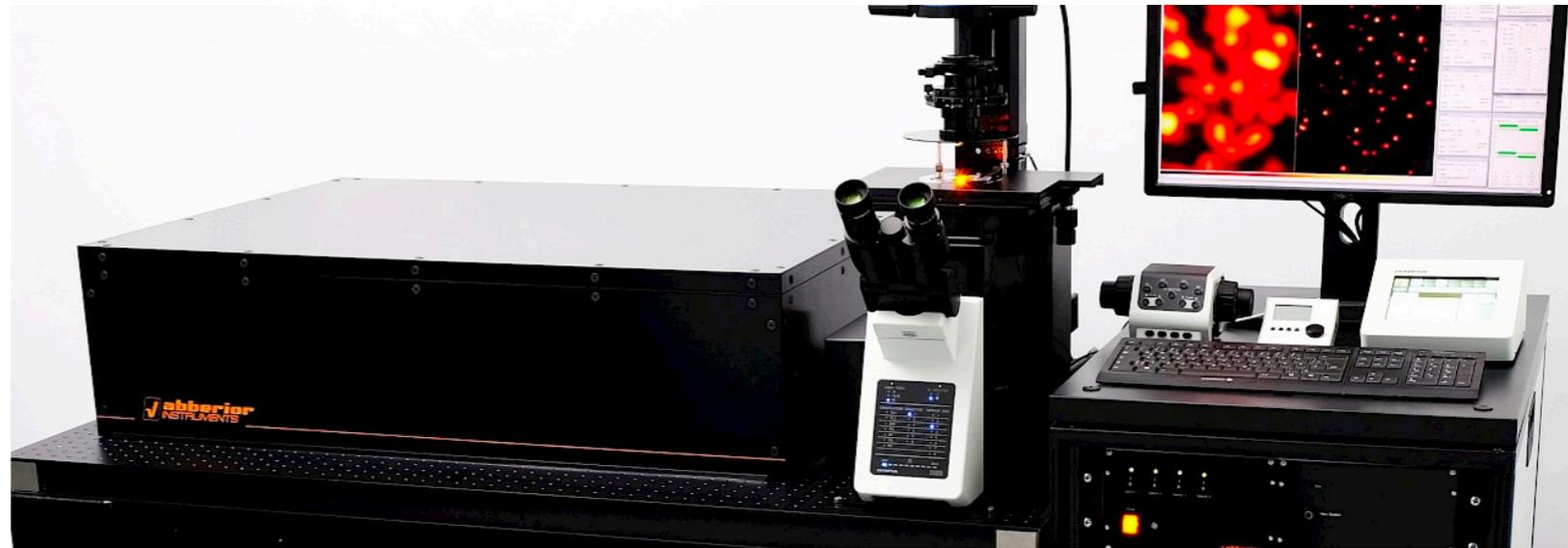
Recommandation de traitements



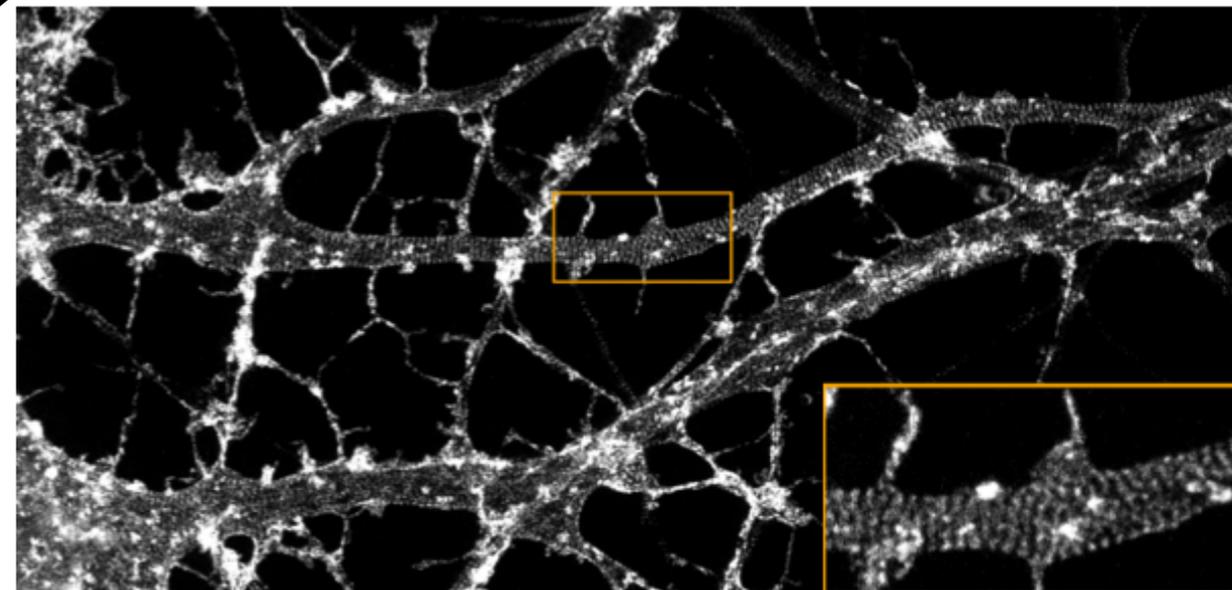
Optimisation d'imagerie microscopique



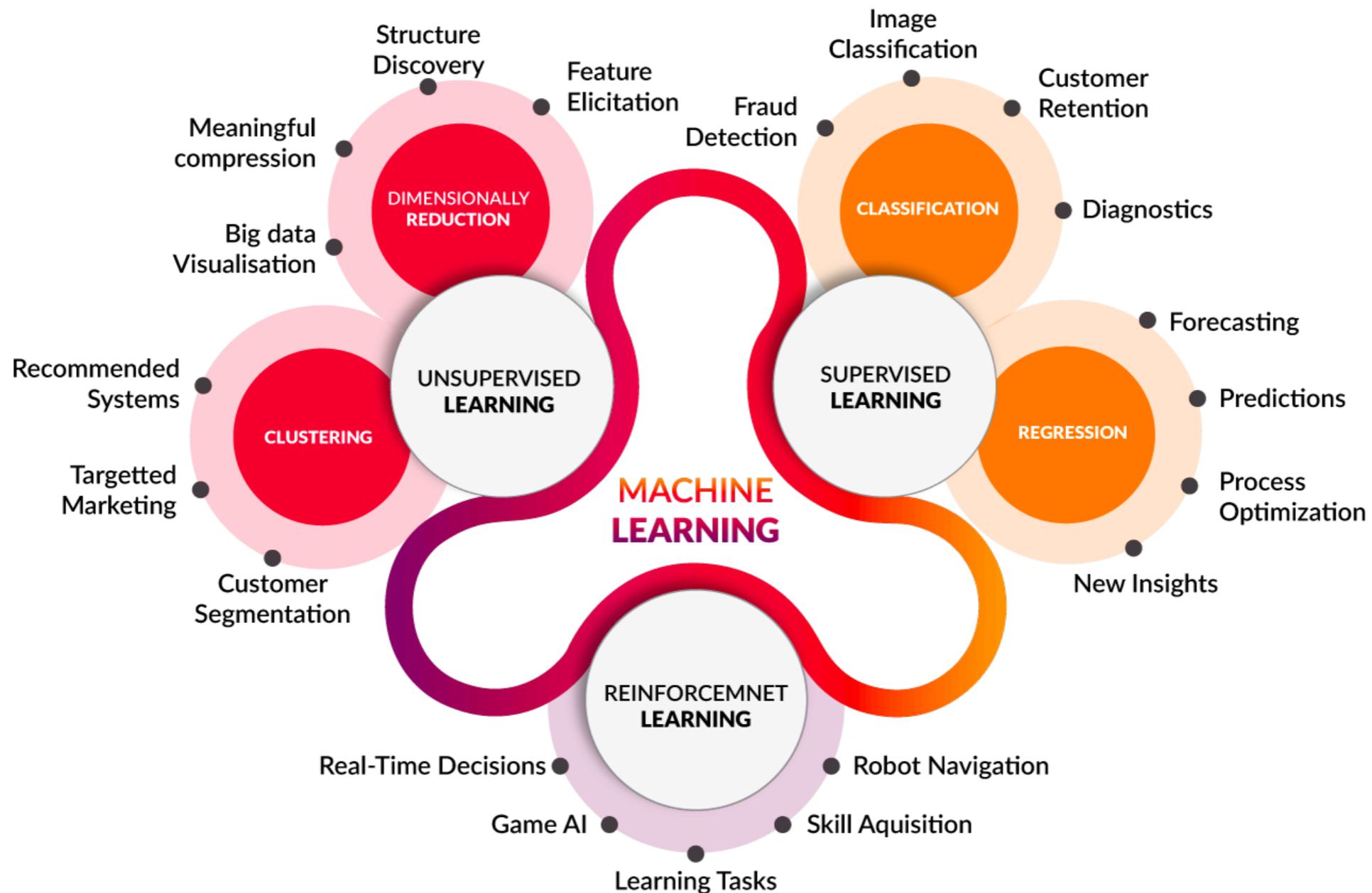
Paramètres
d'imagerie



Qualité de l'image



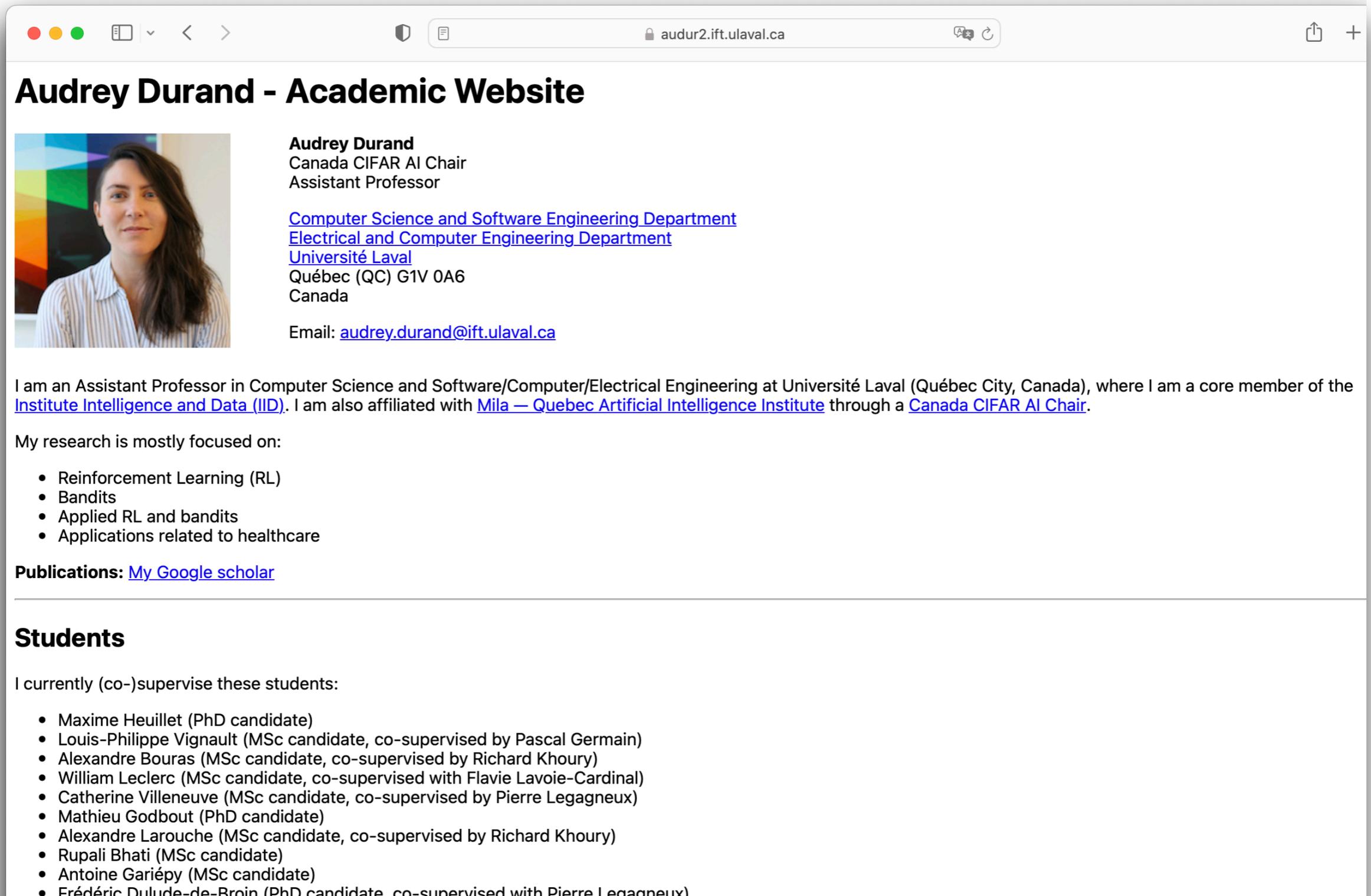
IFT-4201/7201 Apprentissage par renforcement



[Voir les projets des versions A20-A21](#)

Pour plus de détails...

<https://audur2.ift.ulaval.ca/>



The screenshot shows a web browser window with the address bar displaying audur2.ift.ulaval.ca. The page title is "Audrey Durand - Academic Website". On the left is a portrait of Audrey Durand. To the right of the portrait, her name and titles are listed: "Audrey Durand", "Canada CIFAR AI Chair", and "Assistant Professor". Below this, her department and university are listed: "Computer Science and Software Engineering Department", "Electrical and Computer Engineering Department", and "Université Laval". Her address is "Québec (QC) G1V 0A6, Canada". Her email is "audrey.durand@ift.ulaval.ca". A paragraph of text describes her role as an Assistant Professor in Computer Science and Software/Computer/Electrical Engineering at Université Laval, mentioning her affiliation with the Institute Intelligence and Data (IID) and Mila — Quebec Artificial Intelligence Institute through a Canada CIFAR AI Chair. A section titled "My research is mostly focused on:" lists four bullet points: Reinforcement Learning (RL), Bandits, Applied RL and bandits, and Applications related to healthcare. A "Publications:" section links to "My Google scholar". A section titled "Students" lists eight students currently supervised by her, including Maxime Heuillet (PhD candidate), Louis-Philippe Vignault (MSc candidate), Alexandre Bouras (MSc candidate), William Leclerc (MSc candidate), Catherine Villeneuve (MSc candidate), Mathieu Godbout (PhD candidate), Alexandre Larouche (MSc candidate), Rupali Bhati (MSc candidate), Antoine Gariépy (MSc candidate), and Frédéric Dulude-de-Broin (PhD candidate).

Audrey Durand - Academic Website



Audrey Durand
Canada CIFAR AI Chair
Assistant Professor

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[Electrical and Computer Engineering Department](#)
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Québec (QC) G1V 0A6
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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 Houry)
- 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 Houry)
- Rupali Bhati (MSc candidate)
- Antoine Gariépy (MSc candidate)
- Frédéric Dulude-de-Broin (PhD candidate, co-supervised with Pierre Legagneux)