

Aton Kamanda

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EDUCATION

University of Namur

Bachelor of computer science with distinction (minor in mathematics)

Namur

Sept. 2018 – Sept. 2021

University of Montreal

Master of artificial intelligence, 3.925/4.3 GPA

Montreal

Sept. 2021 – Present

EXPERIENCE

Developement of a bioinformatics web application for a lab

University of Namur

June 2020 – October 2020

Belgium, Namur

- Developed a full-stack web application using Django, Javascript, PostgreSQL and RDkit
- Usage of RDkit machine learning algorithms in order to manipulate, draw and extract insight from molecules

Teacher assistant for a university level programming project course

University of Namur

January 2021 – June 2021

Belgium, Namur

- Work of accompaniment and teaching of more than 120 first year students.
- The work included the correction of the students' work and project infrastructure building.

MS research student in deep learning

GEODES - Software engineering lab

September 2021 – Present

Canada, Montreal

- Researching state of the art deep learning and reinforcement learning methods.
- I have been awarded a grant to research and develop continual learning methods in deep learning.
- I have been reviewer for top 3 software engineering conferences.

PROJETS

Dreamer reimplementatation | *Pytorch, OpenAI Gym*

January 2022 - May 2022

- * Reimplementation of the paper [Dream to Control: Learning Behaviors by Latent Imagination](#) from scratch in Pytorch with the add of [VICReg](#) for representation learning.
- * We managed to achieve the same result as the base tensorflow implementation (sometimes even better on some environnements).

TECHNICAL STRENGTHS

Research interests : Deep learning, Reinforcement learning, Robotic, Brain-computer interfaces, Computational neuroscience, Simulations (Both for training agents or simulations based inference), Differentiable physics.

Technical: Pytorch, OpenAI Gym, Tensorflow, Keras, Pandas, NumPy, Matplotlib, RDkit, Sci-kit learn, Taichi

SELECTED COURSES

All my courses have been taken at Montreal institute for learning algorithm. ([MILA](#))

IFT 6390: Fundamentals of machine learning (A-): Machine learning course that focus in depth on the algorithmic and mathematical fundamentals of machine learning [Link](#).

IFT 6285: Natural language processing (A) : Language modeling and recurrent neural networks, word meaning and word embedding, sentence embeddings, machine translation, attention, transformers, GPT, BERT...

IFT 6135: Representation learning (A-): Course about the fundamentals and recent advances in the area of deep learning. Based on the reference book for the subject Deep learning, the course was given by [Aaron Courville](#), one of the authors of the book which made us gain some deep insight about it. [Link](#).

IFT 6163: Robot learning (A+): Course about the state of the art of deep reinforcement learning and using learning algorithms for robotics, example of subject are model-based RL, Sim2Real, hierarchical RL, multi-Agent RL, learning reward functions, continual learning, self-play, unsupervised RL,... [Link](#).