UE Introduction to Artificial Intelligence

Niveau d'étude
Bac +4

ECTS
3 crédits

Composante
UFR IM2AG (informatique, mathématiques et mathématiques appliquées)

Période de l'année
Automne (sept. à dec./janv.)

> **Langue(s) d'enseignement:** Anglais

> **Ouvert aux étudiants en échange:** Oui

> **Code d'export Apogée:** GBX7MO10

Présentation

Description

This course aims to introduce to students the basics of and a large overview on Artifical Intelligence, including Machine Learning, Deep Learning and Symbolic AI.

Objectifs

Providing a solid background in AI, understanding the principles in AI, developing the skills to model, implement and deploy simple AI models in different contexts, analysing the advantage and the limits of AI

Heures d'enseignement

CM	CM	19,5h
TP	TP	13,5h

Pré-requis recommandés

Very basic notions in Linear Algebra (Matrices), Analysis and Probability, basic programming in Python

Syllabus

The course contains three parts. 1. Machine Learning: Basics, Supervised ML, Unsupervised ML, Regularization, Evaluation of ML. 2. Deep Learning: Dense neural networks, Convolution Neural Networks, Recurrent Neural Networks, Gradient Descent, Backpropagation, Large Language Model (it time permits). 3. Symbolic AI: Logic-based Knowledge, Rule-based Reasoning.

Compétences visées

Understanding the notions and principles, manipulating simple analysis, implementing AI models

Bibliographie

An introduction to Statistical Learning, very good book with online version: https://www.statlearning.com/

Infos pratiques

Contacts

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Campus

❯ Grenoble - Domaine universitaire