Le sujet d'étude des professions de l'Intelligence Artificielle

Nathan Hoche

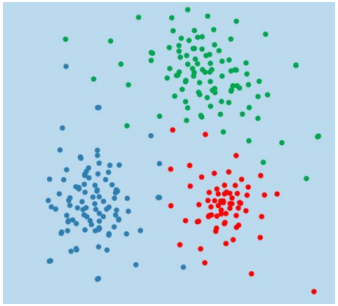
Sommaire

01

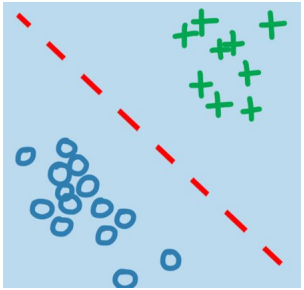
Type d’apprentissage

Quels sont les grandes techniques d’apprentissage?

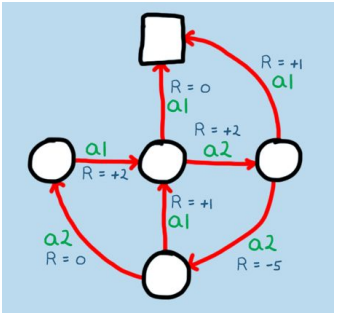
Unsupervised



Supervised



Reinforcement



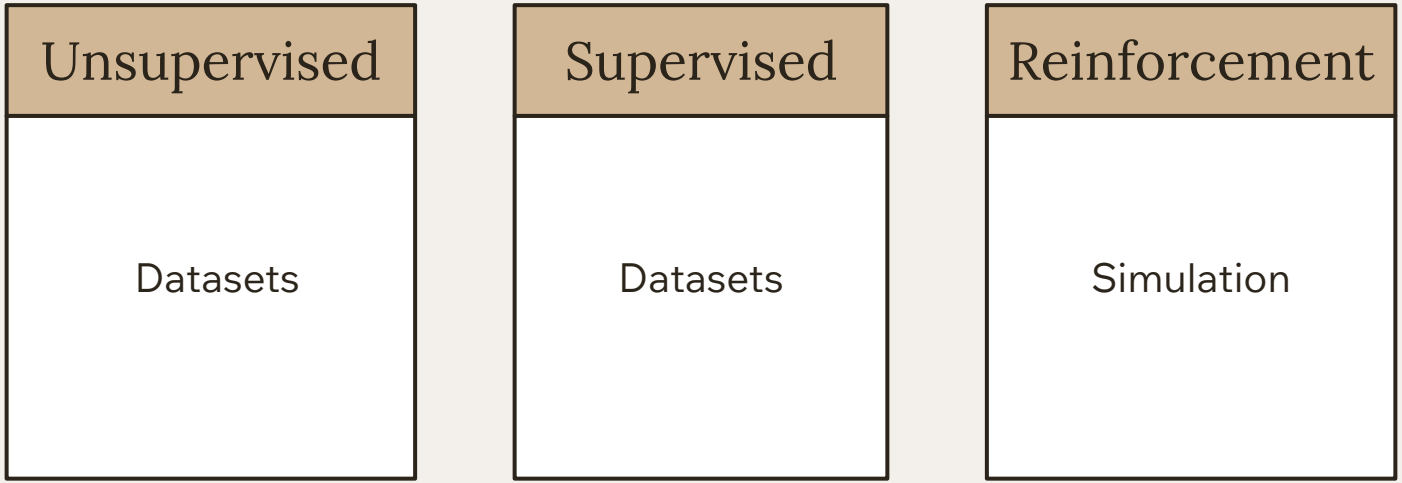
Unsupervised	Supervised	Reinforcement
Uniquement les données	Les données + les réponses	Aucune données

Unsupervised	Supervised	Reinforcement
Si on ne connaît pas les réponses	Si on connaît les réponses	Pour trouver la solution dans un environnement

02

Entrainement

Avec quoi entraîner les modèles ?


Unsupervised
Datasets
Supervised
Datasets
Reinforcement
Simulation

Id SPL-SPW-PTL-PTW(CM)	SepalLengthCm Length of the sepal (in cm)	SepalWidthCm Width of the sepal (in cm)	PetalLengthCm Length of the petal (in cm)	PetalWidthCm Width of the petal (in cm)	Species Species name
1 150	4.3 7.9	2 4.4	1 6.9	0.1 2.5	3 unique values
1	5.1	3.5	1.4	0.2	Iris-setosa
2	4.9	3.0	1.4	0.2	Iris-setosa
3	4.7	3.2	1.3	0.2	Iris-setosa
4	4.6	3.1	1.5	0.2	Iris-setosa
5	5.0	3.6	1.4	0.2	Iris-setosa
6	5.4	3.9	1.7	0.4	Iris-setosa
7	4.6	3.4	1.4	0.3	Iris-setosa
8	5.0	3.4	1.5	0.2	Iris-setosa
9	4.4	2.9	1.4	0.2	Iris-setosa
10	4.9	3.1	1.5	0.1	Iris-setosa
11	5.4	3.7	1.5	0.2	Iris-setosa
12	4.8	3.4	1.6	0.2	Iris-setosa
13	4.8	3.0	1.4	0.1	Iris-setosa
14	4.3	3.0	1.1	0.1	Iris-setosa
15	5.8	4.0	1.2	0.2	Iris-setosa
16	5.7	4.4	1.5	0.4	Iris-setosa
17	5.4	3.9	1.3	0.4	Iris-setosa
18	5.1	3.5	1.4	0.3	Iris-setosa
19	5.7	3.8	1.7	0.3	Iris-setosa
20	5.1	3.8	1.5	0.3	Iris-setosa

Dataset

Contient:

- Des colonnes de données
- Une colonne classe

Simulation

- https://www.youtube.com/watch?v=L_4BPjLBF4E
- https://openai.com/research/roboschool
- https://youtu.be/Dw3BZ6O_8LY?feature=shared
- https://youtu.be/DcYLT37ImBY?feature=shared

environment

agent

actions

rewards

observations

03

Crée son Dataset

Manuel	Automatiser
Pour les données nécessitant une vérification	Pour les données présentent en ligne

Datamining: Web Scraping

Extraction des données présentes sur les sites web

- https://www.nfl.com/stats/player-stats/
- https://ledenicheur.fr/product.php?p=5683804
- https://www.google.com/finance/quote/GOOG:NASDAQ?sa=X&sqi=2&ved=2ahUKEwioop6Ch_yDAxXYU6QEHQAeDt4Q3ecFegQIbBAf
- https://garden.org/plants/

Datamining: API

Récupération des informations via des APIs

- https://developer.twitter.com/en/docs/twitter-api
- https://www.reddit.com/dev/api/
- https://developers.google.com/youtube/v3
- https://docs.genius.com/#/getting-started-h1

04

Apprentissage

Datasets

Explore, analyze, and share quality data. Learn more about data types, creating, and collaborating.

+ New Dataset | Your Work

Search datasets | Filters

All datasets | Computer Science | Education | Classification | Computer Vision | NLP | Data Visualization | Pre-Trained Model

Trending Datasets

See All

Global Covid Trend

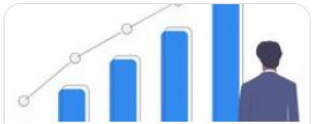
Nidula Elgiriyewithana ⚡ · Updated 7 ho...
Usability **10.0** · 562 kB
1 File (CSV)

▲ 10

Obesity prediction

MrSimple07 · Updated a day ago
Usability **10.0** · 33 kB
1 File (CSV)

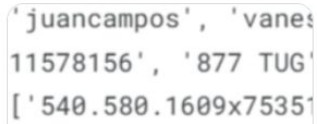
▲ 14



Income prediction dataset (US 20th Century Data).

Kamau Munyori · Updated 9 days ago
Usability 8.2 · 9 MB
5 Files (CSV, other)

▲ 20



PII Detection Dataset (GPT)

pjmathematician · Updated 15 hours ago
Usability **10.0** · 2 MB
1 File (CSV)

▲ 14

Games

See All

Search

INTRODUCTION

Basic Usage

Compatibility with Gym

v21 to v26 Migration Guide

API

Env

Register and Make

Spaces

Wrappers

Vector

Utils

Experimental

ENVIRONMENTS

Classic Control

Box2D

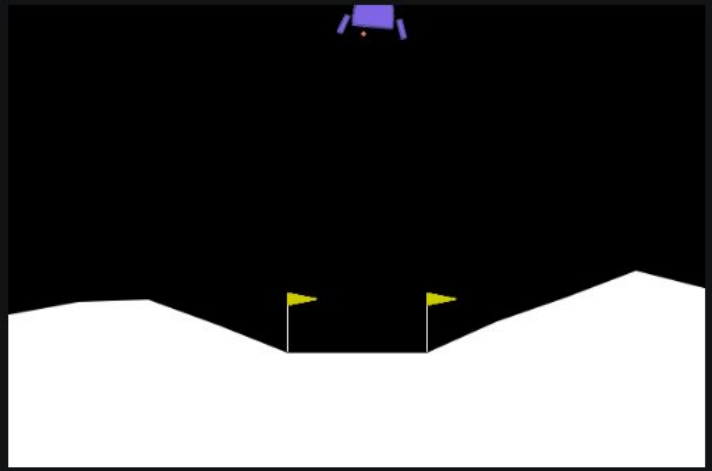
Toy Text

MuJoCo

Atari

Gymnasium

An API standard for reinforcement learning with a diverse collection of reference environments



Gymnasium is a maintained fork of OpenAI's Gym library. The Gymnasium interface is simple, pythonic, and capable of representing general RL problems, and has a compatibility wrapper for old Gym environments:

pandas

pandas is a fast, powerful, flexible and easy to use open source data analysis and manipulation tool, built on top of the Python programming language.

Install pandas now!

Getting started

- Install pandas
- Getting started

Documentation

- User guide
- API reference
- Contributing to pandas
- Release notes

Community

- About pandas
- Ask a question
- Ecosystem

With the support of:

NUMFOCUS OPEN CODE = BETTER SCIENCE

TWO SIGMA

VOLTRON DATA

Coiled A Dask Company

Quansight Labs

NVIDIA

intel

TIDELIFT

Chan Zuckerberg Initiative

bodo.ai

Latest version: 2.2.0

- What's new in 2.2.0
- Release date: Jan 20, 2024
- Documentation (web)
- Download source code

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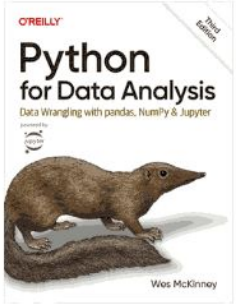
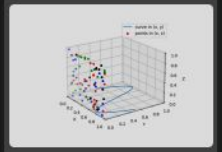


Previous versions

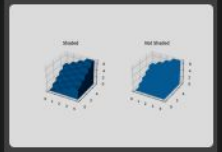
- 2.1.4 (Dec 08, 2023)
  changelog | docs | code
- 2.0.3 (Jun 28, 2023)
  changelog | docs | code
- 1.5.3 (Jan 19, 2023)
  changelog | docs | code
- 1.4.4 (Aug 31, 2022)
  changelog | docs | code

Show more

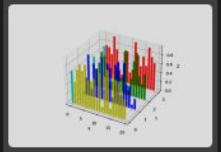
3D plotting



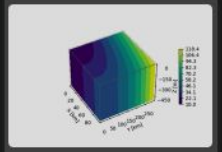
Plot 2D data on 3D plot



Demo of 3D bar charts

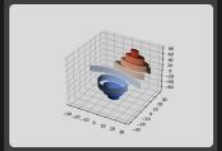


Create 2D bar graphs in different planes

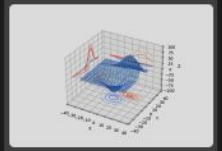


3D box surface plot

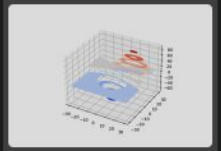
This is like a contour plot in 2D except that the f(x, y)=c curve is plotted on the plane z=c.



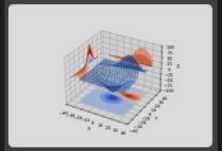
Plot contour (level) curves in 3D using the extend3d option



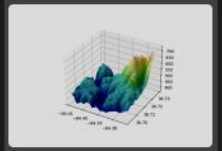
Project contour profiles onto a graph



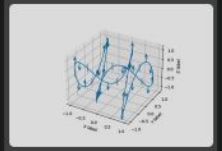
Filled contours



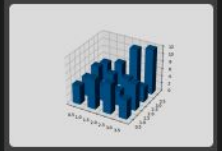
Project filled contour onto a graph



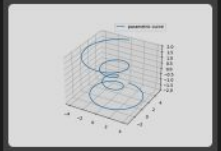
Custom hillshading in a 3D surface plot



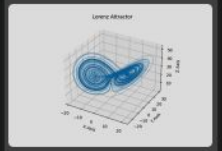
3D errorbars



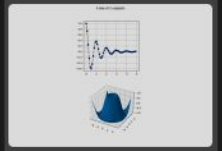
Create 3D



Parametric curve



Lorenz attractor



2D and 3D axes in

Conclusion

1. Type d’apprentissage: Reinforcement, Supervised et Unsupervised
2. Type de donnée : Dataset et Simulation
3. Pour faire son dataset: API ou Web Scraping

Avez-vous des questions?