Physics-Aware Deep Learning
(Term Project)

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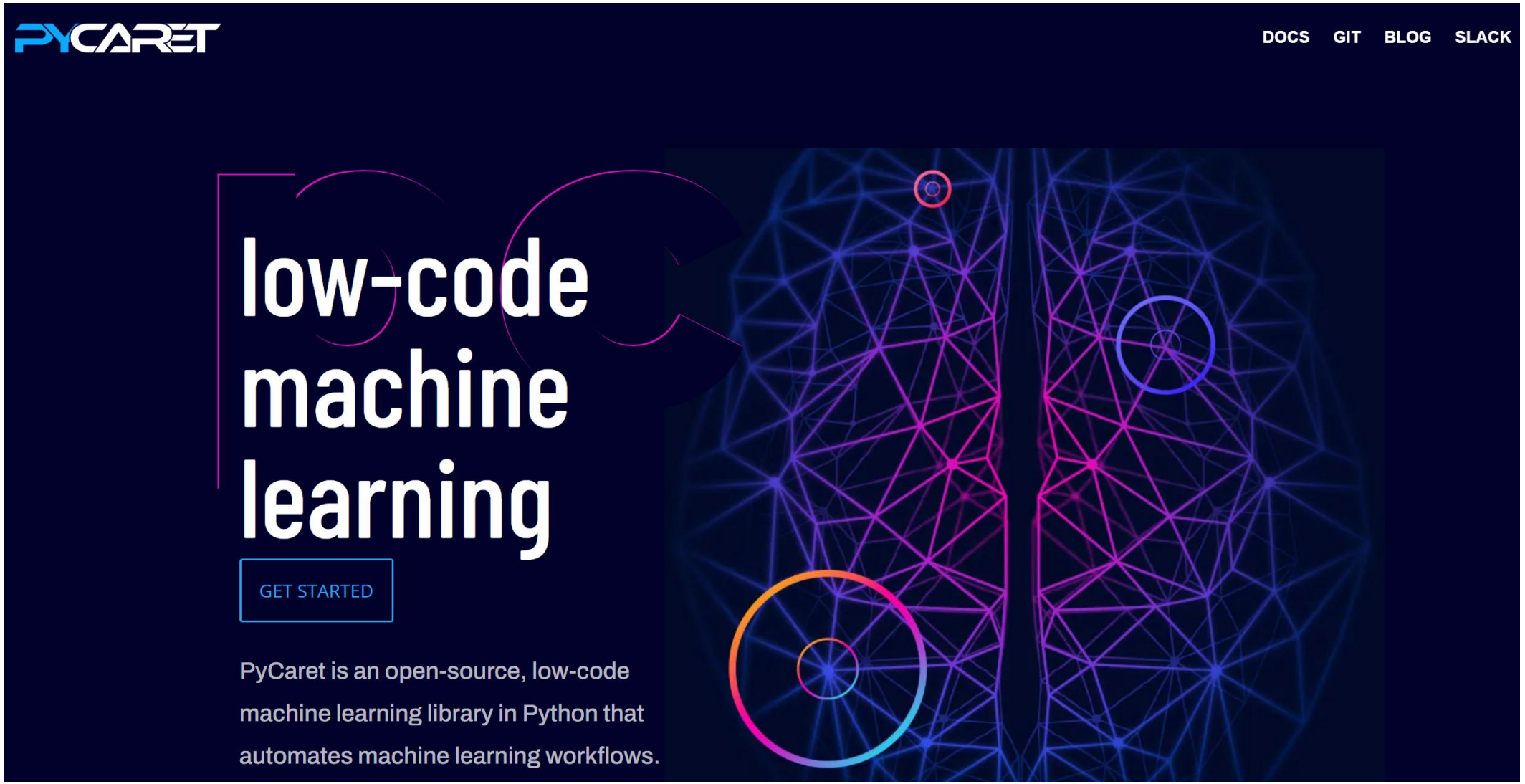
PADL Term project

- **Pycaret 을 이용한 머신러닝 모델 개발 보고서 작성**
  - PPT 자유양식
  - 제출기한: 7/10일(목) 오후 4시 (송상현 조교, hyeon4977@naver.com)
- **아래 링크에 있는 tutorials 중 본인 연구에 맞는 주제를 선정하여 진행**
  - https://pycaret.gitbook.io/docs/get-started/tutorials
- **(추천) 본인 연구분야에서 많이 활용되는 DB에 pycaret을 적용해서 머신러닝 모델 개발**
- **Tutorials 중 하나를 그대로 실행 후 코드의 의미를 설명하는 내용으로 작성해도 무방**
- **Pass/Fail 로 평가**

tutorials/

Tutorial	Module	Link
Binary Classification	`pycaret.classification`	Colab ↗ | GitHub ↗ | NBViewer ↗
Multiclass Classification	`pycaret.classification`	Colab ↗ | GitHub ↗ | NBViewer ↗
Regression	`pycaret.regression`	Colab ↗ | GitHub ↗ | NBViewer ↗
Time Series Forecasting	`pycaret.time_series`	Colab ↗ | GitHub ↗ | NBViewer ↗
Clustering	`pycaret.clustering`	Colab ↗ | GitHub ↗ | NBViewer ↗
Anomaly Detection	`pycaret.anomaly`	Colab ↗ | GitHub ↗ | NBViewer ↗

https://pycaret.org/



GET STARTED

🚀 Quickstart

Get Up and Running in No Time: A Beginner's Guide to PyCaret

🚀 Classification

PyCaret's Classification Module is a supervised machine learning module that is used for classifying elements into groups.

The goal is to predict the categorical class labels which are discrete and unordered. Some common use cases include predicting customer default (Yes or No), predicting customer churn (customer will leave or stay), the disease found (positive or negative).

This module can be used for binary or multiclass problems.

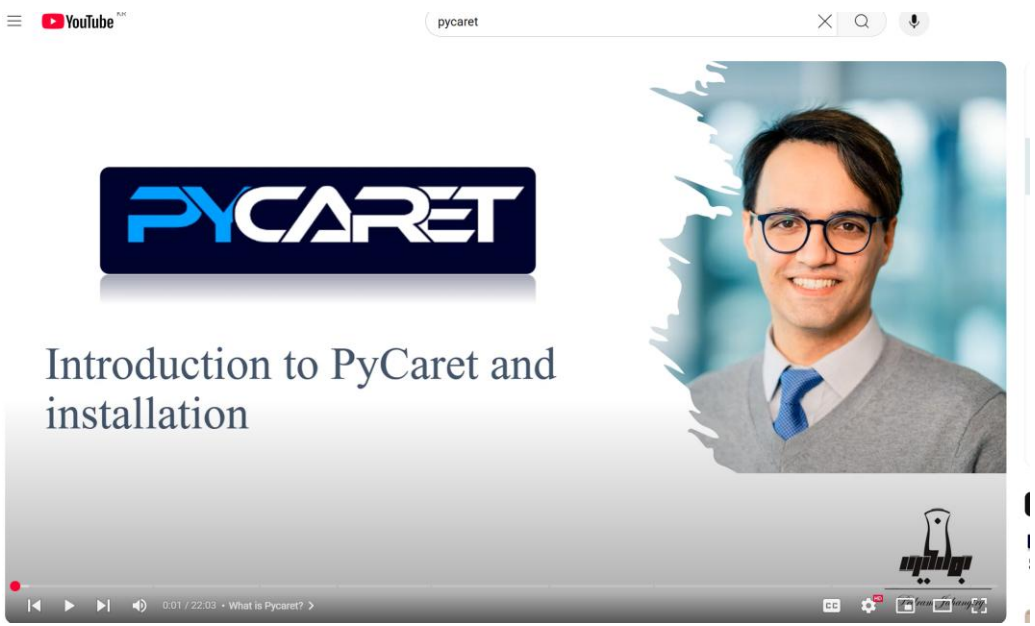
Setup

This function initializes the training environment and creates the transformation pipeline. Setup function must be called before executing any other function. It takes two required parameters: `data` and `target`. All the other parameters are optional.

```
# load sample dataset
from pycaret.datasets import get_data
data = get_data('diabetes')
```

https://pycaret.gitbook.io/docs/get-started/quickstart

Pycaret 관련 참고자료



https://www.youtube.com/watch?v=EaWybJqIdAY&list=PL2GWo47BFyUOqCAj_16yeNspfeM0nfA6q

1 

1-PyCaret introduction (low code machine learning Python package)
Pedram Jahangiry • 5.1K views • 2 years ago

2 

2-PyCaret installation on Windows and Google Colab
Pedram Jahangiry • 3.8K views • 2 years ago

3 

3-PyCaret regression (automated machine learning) from zero to almost hero
Pedram Jahangiry • 4.9K views • 2 years ago

4 

Module 3- boosting algorithms with PyCaret (XGBoost, Catboost and lightGBM)
Pedram Jahangiry • 2.1K views • 2 years ago

5 

Advanced time series forecasting with PyCaret- Is stock price really predictable?
Pedram Jahangiry • 8.2K views • 2 years ago

6 

Predicting the Unpredictable: Can Deep Learning Beat Econometrics and ML in Stock Market Forecasts?
Pedram Jahangiry • 1.6K views • 2 years ago