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## Scikit - LLM

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### Zero-shot Learning (ZSL):

Zero-shot learning (ZSL) is a problem setup in deep learning where, at test time, a learner observes samples from classes which were not observed during training, and needs to predict the class that they belong to. Zero-shot methods generally work by associating observed and non-observed classes through some form of auxiliary information, which encodes observable distinguishing properties of objects.[1] For example, given a set of images of animals to be classified, along with auxiliary textual descriptions of what animals look like, an artificial intelligence model which has been trained to recognize horses, but has never been given a zebra, can still recognize a zebra when it also knows that zebras look like striped horses. This problem is widely studied in computer vision, natural language processing, and machine perception.

### Scikit - LLM:

Scikit-LLM is a game-changer in text analysis. It combines powerful language models like ChatGPT with scikit-learn, offering an unmatched toolkit for understanding and analyzing text. With scikit-LLM, you can uncover hidden patterns, sentiment, and context in various types of textual data, such as customer feedback, social media posts, and news articles. It brings together the strengths of language models and scikit-learn, enabling you to extract valuable insights from text like never before.



## Example of code:

```
pip install scikit-llm

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# importing SKLLMConfig to configure OpenAI API (key and Name)
from skllm.config import SKLLMConfig

# Set your OpenAI API key
SKLLMConfig.set_openai_key("<YOUR_KEY>")

# Set your OpenAI organization (optional)
SKLLMConfig.set_openai_org("<YOUR_ORGANIZATION>")

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# importing zeroshotgptclassifier module and classification dataset
from skllm import ZeroShotGPTClassifier
from skllm.datasets import get_classification_dataset

# get classification dataset from sklearn
X, y = get_classification_dataset()

# defining the model
clf = ZeroShotGPTClassifier(openai_model="gpt-3.5-turbo")

# fitting the data
clf.fit(X, y)

# predicting the data
labels = clf.predict(X)
```

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