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| --- | --- |
| Untrained Data | |
| Fitness Model | |
| Graphing & Plotting | Validation |

* Sklearn takes untrained data and runs it through one of its many fitness models. These models are contained in and processed within classes in that each process data in their own unique way.

Base

Base Mixin

Base Estimator

Package

Fitness Model

Validator

Visualizer

* A package in sklearn can consist of up to three parts.
  + The Fitness Model, used for processing training data
    - The Fitness Model uses a combination of either one or more Estimator and Mixin classes. These can be either of their own design or derived from Estimators and Mixins defined in the *base* package
  + The Visualizer, used for plotting data into a readable graph
  + The Validator, used for validating the accuracy and efficiency of the Estimator

Base

Linear Model

PCA

Cross Decomposition

PLS

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* Each package represents its own unique Fitness Model, each with its own methods for training and special functionalities. Their usage is based off of the universal api described in the sklearn *base* package.
* Different types of fitness models are useful for different types of data and situations. For example, the PCA Learning fitness model is generally more accurate and precise than the sparser Dictionary Learning model, which focuses more on efficiency and readability of data.