


## Document Input Prompt


Act as a code developer who is reading the code documentation.


 Please remember this parameter list mentioned in this documentation: **{parameter list}**.

Please extract all parameter information with their types and default values from the following documents:

short doc

long doc

 **{documentation}**

 **Document split prompt + {documentation segment}**

Your final task is to convert textual constraints from documentation into a specified logic format. Please think it step by step.

### Instructions:

- Logic Symbols:** Use  $\rightarrow$  to denote implication (if...then); Use  $\neg$  for negation (NOT); Use  $\wedge$  for logical AND; Use  $\vee$  for logical OR; Enclose expressions in parentheses  $()$  to clarify the order of operations.
- Keyword Placeholder Usage:** If a constraint contains any of the following keywords: "override", "specify", "have an effect", "no effect", "significant", "ignore", use these keywords as placeholders within your logic expression.
- Solution Format:** Present your solutions as follows:
  - Constraint Number: ...
  - Text Constraint: ...
  - Logical Format: ...

## Constraint Extraction Prompt

## Few-shot In-context Learning

1. Text Constraint: "n\_clusters must be None if distance\_threshold is not None."

Logical Format:  $(\neg(\text{distance\_threshold} = \text{'None'}})) \rightarrow (\text{n\_clusters} = \text{'None'})$ .

2. Text Constraint: "gamma is only significant for 'rbf', 'poly', and 'sigmoid' kernels."

Logical Format:  $((\text{kernel} = \text{'rbf'} \vee \text{kernel} = \text{'poly'}) \vee \text{kernel} = \text{'sigmoid'}) \rightarrow \text{significant}(\text{gamma})$ .

3. Text Constraint: "n\_init: int, default=10. The final results will be the best output of n\_init consecutive runs in terms of inertia. Only used if assign\_labels = 'kmeans'."

Logical Format:  $(\text{assign\_labels} = \text{'kmeans'}) \rightarrow \neg(\text{n\_init} = \text{'None'})$ .

4. Text Constraint: "gamma : float, default=10. Kernel coefficient for rbf, poly, sigmoid, laplacian and chi2 kernels. Ignored for affinity = 'nearest neighbors'."

Logical Format:  $(\text{affinity} = \text{'nearest\_neighbors'}) \rightarrow \text{ignore}(\text{gamma})$ .