

# Coding project: logic predicate name retrieval

Implement one Machine Learning (ML) algorithm or ML model (the sklearn library is accepted) in python language using data from in this collab notebook

(<https://drive.google.com/file/d/1QUXfHrX1kMKPpujgYPH-xdhtcJf5uTYV/view?usp=sharing>)

- Description of this dataset:
  - This dataset is generated from GEO (a well-known semantic parsing dataset). The target of this dataset is the relation between the natural sentence and logic-term of its.
  - It contains 5 columns ['label', '#1 ID', '#2 ID', 'sentence1', 'sentence2']. We only use 'sentence1', 'sentence2' and 'label' as a input features and label of each training/testing sample, separately.
  - Size of this dataset: 20400 training samples, 3400 dev samples, around 9500 private test samples.

	label	#1 ID	#2 ID	sentence1	sentence2
3000	1	next_to:t	88	next _ to : t	how mani state border s0
3001	0	size:i	88	size : i	how mani state border s0
3002	1	count	88	count	how mani state border s0
3003	0	elevation:i	88	elevation : i	how mani state border s0
3004	0	argmin	88	argmin	how mani state border s0
...	...	...	...	...	...
3095	1	loc:t	91	loc : t	what river flow through s0
3096	0	state:t	91	state : t	what river flow through s0
3097	1	lambda	91	lambda	what river flow through s0
3098	0	argmax	91	argmax	what river flow through s0
3099	1	river:t	91	river : t	what river flow through s0

Output requirements:

- **Fill your code into the clone of the above notebook**, download it from google collab, and upload your notebook into the LMS system. (**Note: your notebook has to be run successfully in the anonymous account of google collab.** In some cases, your code needs to download an online file, please upload that file to your google drive and use “gdown” command line similar to the example in our notebook).
- **Optimize your model** to get the best performance as much as possible. The higher performance system will have more chance to get a higher score. The final performance will be re-evaluated by our private test.
- **Write a report about your method** including all references if you use external libraries. (For example, you should mention BERT paper if you using this pre-trained model).
- Compress your coding notebook and “report.pdf” to a zip file (**e.g. s1920xxx.zip**) and upload it to the LMS system before the deadline.