From POC to Prod

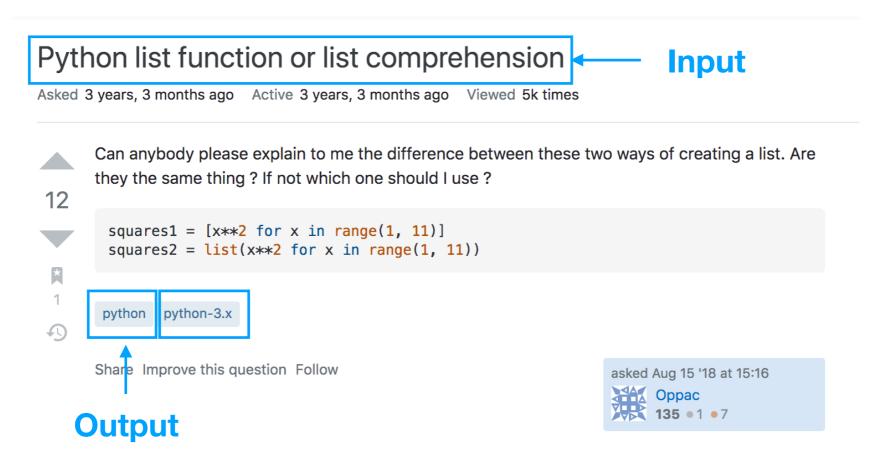
EPF - P2023

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From POC to Prod - Lab1

 In this lab we will construct a model to automatically tag stackoverflow.com questions by using their title



This is a multi-class classification task



From POC to Prod - Lab1

 First approach: use scikitlearn's SGDClassifier combined with a HashingVectorizer to transform the input

Read data

- 1. Download data from Moodle
- 2. Read data from notebook

Preprocessing

- 1. Keep only the examples where tag_position is equal to 0
- 2. Filter the example where the labels are seen less than 100 occurrences
- 3. Keep only the title as feature and use HashingVectorizer

Training

1. Use a SGDClassifier from sklearn



From POC to Prod - Lab1

 Second approach: use Keras sequential model combined with a pre-trained BERT model to embed the input

Read data

- 1. Download data from Moodle
- 2. Read data from notebook

Preprocessing

- 1. Keep only the examples where tag_position is equal to 0
- 2. Filter the example where the labels are seen less than 100 occurrences
- Keep only title as feature and use a pre-trained BERT model to title text into embeddings

Training

- Use a Sequential <u>Keras</u> model with the following architecture
 - A dense layer with the dimension of your choice and ReLu activation
 - Another dense layer with dimension as the number of unique labels and sigmoid
 - Loss should be binary cross entropy, optimizer should be SGD and metric is accuracy

