LSTM 모델

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Data Parsing -> Embedding -> train-> test

Dataset

문제	1	2	3	4	답
To _____ the repair job on time, the engineer asked the carpenters and electricians to do overtime yesterday.	finished	finishing	finishes	finish	finish
The union leader plans to _____ his remarks on work safety problems to the management during the meeting this afternoon.	address	exalt	broadcast	send	address
_____ to secure your export products, we recommend that you have them insured before shipment.	In order	So that	Though	Because	In order
The consultant was impressed that the draftsmen worked efficiently even without the ------- of a design director.	standard	correction	supervision	accuracy	supervision
Jerry Cunningham will ------- the names of researchers and production assistants who will join Ms. Marina Fletcher at the Paris Film Festival.	announce	diffuse	trade	command	announce
With all the negative reviews about the novel, it seems that the author's message was ------- by literary critics.	misinterpret	misinterprets	misinterpreting	misinterpreted	misinterpret
The painting's monetary worth in the arts market _____ when it was discovered that it was one of the earliest works done by the renowned artist Van Gogh.	doubled	rolled	plunged	overlapped	doubled
Ellen's probationary status was extended by _____ month after it was discovered that she had no actual experience in accounting procedures.	more	other	another	one another	another
If you would like to cancel or make any changes to your order, please include your order number on the subject line in all _____ to customer service.	incidence	correspondence	adherence	assistance	correspond
_____ last minute finishing touches in decorating the venue, preparations for the community ball to be held in the afternoon are complete.	But for	On account of	In place of	Instead of	But for
Clients interested in holding social or business gatherings at the Mayfair Hotel may inquire about the availability of function rooms at _____ reception area or on the hotel's website.	us	ours	ourselves	our	our
The most recent economic crisis resulted in the near collapse of Smart Savings Bank, a highly _____ financial institution in Asia and Europe.	recognizes	recognized	has recognized	recognizing	recognized
The national economy has been ------- for nearly two years because of the impact of global recession.	stagnant	stagnancy	stagnating	stagnantly	stagnant
Garbage, ------- biodegradable or nonbiodegradable, should be thrown into designated trash cans within the park.	whenever	until	also	whether	whether
At the general assembly, the manager thanked the employees for giving their full ------- to the company.	collection	commitment	relation	duration	commitmen
Mr. Forester is confident that _____ can convince the Japanese investors to do further business with our company.	you	yours	yourself	your	you
Customers cannot claim their cash remittance _____ presenting valid identification, such as a driver's license and passport.	without	around	onto	along	without
Due to the economic crisis, many companies all over the world are _____ to reduce operating costs next year.	expectedly	expected	expectation	expectant	expected
Low sales recorded by Blued Clothing last year was primarily due to its ------- popularity in the market.	retractable	transferable	minimizing	declining	declining
Climate in different parts of the world has become ------- unpredictable because of global warming.	increase	increasable	increasingly	increased	increasingly
Overtime requests must be ------- by employees' immediate supervisors and the personnel department.	approved	delivered	initiated	founded	approved
If you would like to ------- another venue for the party, please contact the events coordinator on her mobile phone.	suggest	comment	release	advocate	suggest
ExD Enterprise Incorporated is the leading local ------- of imported contact lenses in the country.	distributed	distributing	distributor	distribution	distributor
The food packaging process is _____ checked by a team of well-trained quality control staff.	sensitively	carefully	prominently	importantly	carefully

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Embedding

Torch embedding을 이용중

To finish the repair job on time, the engineer asked the carpenters and electricians to do overtime yesterday.

➡️

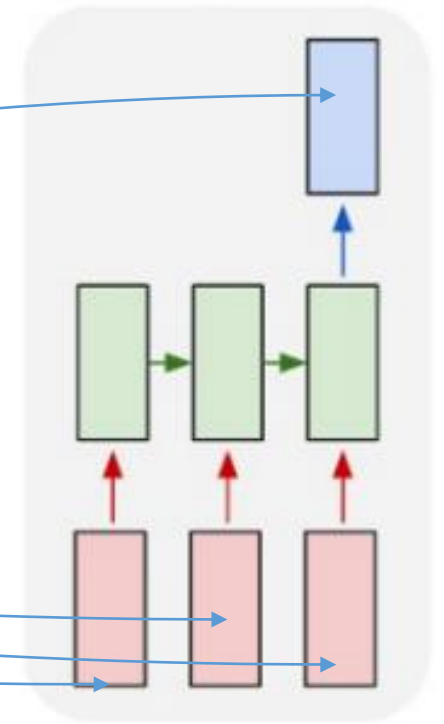[[[-0.1538, 0.3538, ... ,0.244],
[0.3532,-3.3243,...,1.2141]]]

LSTM 모델
Traing and test
LSTM의 Many to one 형태

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TRUE

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Traing and test
LSTM의 Many to one 형태

1. Hidden layer
2. Hidden dimension
3. Vocabulary size
4. Embedding dimension
5. Classes number
6. Dropout possibility

```python
model = BasicLSTM(1, 256, vocab_size, 128, n_classes, 0.5).to(DEVICE)
```

```python
class BasicLSTM(nn.Module):
    def __init__(self, n_layers, hidden_dim, n_vocab, embed_dim, n_classes, dropout_p=0.2):
        super(BasicLSTM, self).__init__()
        print("Building Basic LSTM model...")
        self.n_layers = n_layers
        self.embed = nn.Embedding(n_vocab, embed_dim)
        self.hidden_dim = hidden_dim
        self.dropout = nn.Dropout(dropout_p)
        self.lstm = nn.LSTM(embed_dim, self.hidden_dim,
                            num_layers=self.n_layers,
                            dropout=dropout_p,
                            batch_first=True)
        self.out = nn.Linear(self.hidden_dim, n_classes)

    def forward(self, x):
        x = self.embed(x)   # [b, i] -> [b, i, e]
        h_0 = self._init_state(batch_size=x.size(0))
        x, _ = self.lstm(x, h_0)   # [i, b, h]
        h_t = x[:,-1,:]
        self.dropout(h_t)
        logit = self.out(h_t)   # [b, h] -> [b, o]
        return logit
```