

인공지능기초응용 II

5 주차 과제

인공지능응용

K2025029 금동환

목차

1. [파이썬 형태소 분석기\(KoNLTK와 KoNLPy\) 실습](#)
2. ["\[실습\] KoNLTKtest.zip"의 파이썬 코드 3개](#)
3. [\[과제1\]에서 준비한 텍스트 파일에 대해 파이썬/윈도용 형태소 분석기 실습](#)

1. 파이썬 형태소 분석기(KoNLTK와 KoNLPy) 실습

```

1 from konlp.kma.klt2023 import klt2023
2 from konlp.tag import Okt
3 from konlp.tag import Kkma
4 from konlp.tag import Komoran
5
6 text = "안녕하세요. 국민대학교 소프트웨어융합대학원 인공지능응용 K2025029 김동환입니다."
7
8 print('----- klt2023')
9 klt=klt2023()
10 print(klt.pos(text))
11 print(klt.morphs(text))
12 print(klt.nouns(text))
13 print('----- Okt')
14 okt = Okt()
15 print(okt.pos(text))
16 print(okt.morphs(text))
17 print(okt.nouns(text))
18 print('----- Kkma')
19 kkma = Kkma()
20 print(kkma.pos(text))
21 print(kkma.morphs(text))
22 print(kkma.nouns(text))
23 print('----- Komoran')
24 komoran = Komoran()
25 print(komoran.pos(text))
26 print(komoran.morphs(text))
27 print(komoran.nouns(text))
28

```

Run 1 (1) x

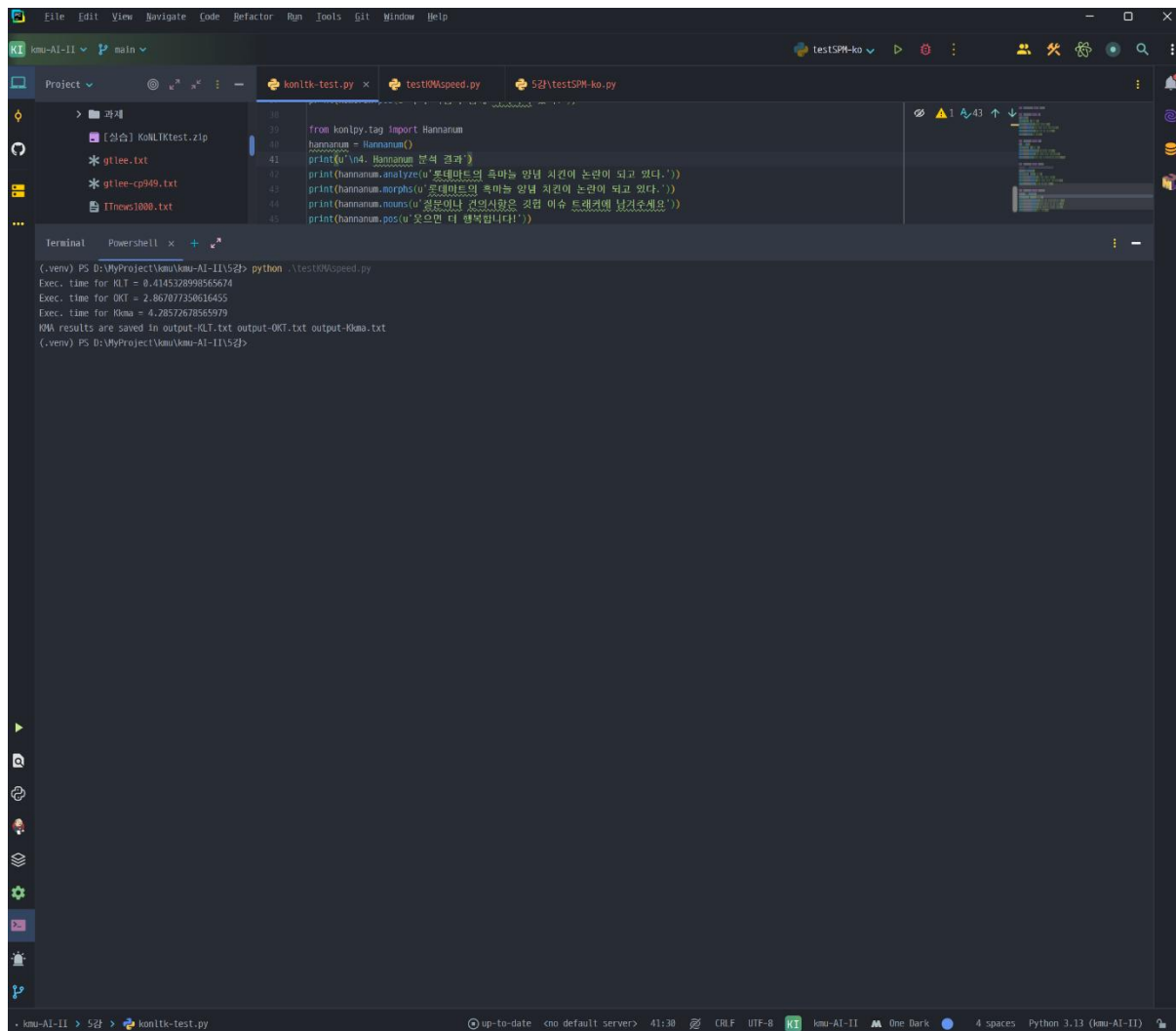
```

D:\MyProject\kmu\kmu-AI-11\venv\Scripts\python.exe D:\MyProject\kmu\kmu-AI-11\5강\과제\1.py
----- klt2023
['안녕/아', '국민대학교/C', '소프트웨어융합대학원/K', '인공지능응용/C', 'K2025029/A', '김동환/K']
['안녕', '국민대학교', '소프트웨어융합대학원', '인공지능응용', 'K2025029', '김동환']
['안녕', '국민대학교', '소프트웨어융합대학원', '인공지능응용', '김동환']
----- Okt
[('안녕하세요', 'Adjective'), ('.', 'Punctuation'), ('국민', 'Noun'), ('대학교', 'Noun'), ('소프트웨어', 'Noun'), ('융합', 'Noun'), ('대학원', 'Noun'), ('인공', 'Noun'), ('지능', 'Noun'), ('응용', 'Noun'), ('K', 'Alph
[('안녕하세요', '.'), ('국민', '대학교', '소프트웨어', '융합', '대학원', '인공', '지능', '응용', 'K', '2025029', '금', '동환', '아', '입니다', '.')]
[('국민', '대학교', '소프트웨어', '융합', '대학원', '인공', '지능', '응용', '금동', '환', '입니다', '.')]
----- Kkma
[('안녕', 'NNG'), ('하', 'XSV'), ('세요', 'EFN'), ('.', 'SF'), ('국민대학교', 'NNG'), ('소프트웨어', 'NNG'), ('융합', 'NNG'), ('대학원', 'NNG'), ('인공지능', 'NNG'), ('응용', 'NNG'), ('K', 'OL'), ('2025029', 'NR'), ('
[('안녕', '아', '세요', '.'), ('국민대학교', '소프트웨어', '융합', '대학원', '인공지능', '응용', 'K', '2025029', '금', '동환', '아', '입니다', '.')]
[('국민', '대학교', '소프트웨어', '융합', '대학원', '인공', '지능', '응용', '2025029', '금', '김동환', '동환')]
----- Komoran
[('안녕하세요', 'NNP'), ('.', 'SF'), ('국민대학교', 'NNP'), ('소프트웨어', 'NNG'), ('융합', 'NNG'), ('대학원', 'NNP'), ('인공지능', 'NNP'), ('응용', 'NNP'), ('K', 'SL'), ('2025029', 'SN'), ('금', 'NNG'), ('동환', 'NNP
[('안녕하세요', '.'), ('국민대학교', '소프트웨어', '융합', '대학원', '인공지능', '응용', 'K', '2025029', '금', '동환', '아', '입니다', '.')]
[('안녕하세요', '국민대학교', '소프트웨어', '융합', '대학원', '인공지능', '응용', '금', '동환')]
Process finished with exit code 0

```


2. "[실습] KoNLTKtest.zip"의 파이썬 코드 3개

A. testKMASpeed.py



The screenshot shows an IDE with the following components:

- Project Explorer:** Shows a project named 'kmu-AI-II' with a file 'KoNLTKtest.zip' and its contents: 'gliee.txt', 'gliee-cp949.txt', and 'ITnews1000.txt'.
- Code Editor:** Displays the code for 'testKMASpeed.py'. The code imports 'Hannanum' from 'konlpy.tag', initializes a 'Hannanum' object, and prints the results of 'analyze', 'morphs', 'nouns', and 'pos' for a given text.
- Terminal:** Shows the execution output of the script. It displays the execution times for KLT, OKT, and KMA, and confirms that the results are saved in 'output-KLT.txt' and 'output-KMA.txt'.

```
from konlpy.tag import Hannanum
hannanum = Hannanum()
print(u'\n4. Hannanum 분석 결과')
print(hannanum.analyze(u'롯데마트의 특마는 양념 치킨이 논란이 되고 있다.'))
print(hannanum.morphs(u'롯데마트의 특마는 양념 치킨이 논란이 되고 있다.'))
print(hannanum.nouns(u'장문이나 긴문장은 띄어쓰기를 하세요'))
print(hannanum.pos(u'웃으면 더 행복합니다!'))
```

```
(.venv) PS D:\MyProject\kmu\kmu-AI-II\52> python .\testKMASpeed.py
Exec. time for KLT = 0.4145128998565674
Exec. time for OKT = 2.867077358616455
Exec. time for KMA = 4.28572678565979
KMA results are saved in output-KLT.txt output-KMA.txt
(.venv) PS D:\MyProject\kmu\kmu-AI-II\52>
```

B. konltk-test.py

The image shows a Windows 10 desktop with a VS Code editor open. The editor has three tabs: 'konlpy-test.py', 'testKSpeed.py', and '5강1testSPM-ko.py'. The 'konlpy-test.py' tab is active, showing a Python script that uses the 'konlpy' library for Korean NLP analysis. The script defines a function 'testSPM' that takes a list of words and returns a list of morphological and syntactic analysis results. The main part of the script calls 'testSPM' with a list of Korean words and prints the results.

```

from konlpy.tag import Hannanum
hannanum = Hannanum()

print(u'v4. Hannanum 분석 결과')
print(hannanum.analyze(u'롯데마트의 특마는 양념 치킨이 논란이 되고 있다.'))
print(hannanum.morphs(u'롯데마트의 특마는 양념 치킨이 논란이 되고 있다.'))
print(hannanum.nouns(u'정宗이나 전의사항은 귀한 이쑥 토레케에 넣겨주세요'))
print(hannanum.pos(u'웃으면 더 행복합니다!'))

```

The terminal output shows the results of the analysis, categorized by type (e.g., '0. KLT2000 분석 결과', '1. Okt 분석 결과', '2. Kimo 분석 결과', '3. Konoran 분석 결과', '4. Hannanum 분석 결과'). The results include morphological analysis (e.g., '치킨', '양념', '치킨이', '논란이', '되고', '있다') and syntactic analysis (e.g., 'Noun', 'Verb', 'Adjective', 'Particle').

C. testSPM-ko.py

The screenshot shows a VS Code editor with the file `testSPM-ko.py` open. The code defines a `SentencePieceProcessor` and a `SentencePieceTrainer` to train a model. The terminal output shows the command being run and the training process details.

```

1 import sentencepiece as spm
2 sp = spm.SentencePieceProcessor()
3
4 spm.SentencePieceTrainer.Train('--input=Inews1000.txt --model_prefix=Inews --vocab_size=8000')
5 #spm.SentencePieceTrainer.Train('--input=gt100.txt --model_prefix=gt100 --vocab_size=16000')
6 #spm.SentencePieceTrainer.Train('--input=ko_wiki_text.txt --model_prefix=koiki --vocab_size=64000')
7
8 sp.load('Inews.model') Unresolved attribute reference 'load' for class 'SentencePieceProcessor'

```

```

(.venv) PS D:\MyProject\kmu-AI-IT\52J> python .\testSPM-ko.py
sentencepiece.trainer.cc(178) LOG(INFO) Running command: --input=Inews1000.txt --model_prefix=Inews --vocab_size=8000
sentencepiece.trainer.cc(78) LOG(INFO) Starts training with :
trainer_spec {
  input: Inews1000.txt
  input_format:
  model_prefix: Inews
  model_type: UNIGRAM
  vocab_size: 8000
  self_test_sample_size: 0
  character_coverage: 0.9995
  input_sentence_size: 0
  shuffle_input_sentence: 1
  seed_sentencepiece_size: 1000000
  shrinking_factor: 0.75
  max_sentence_length: 4192
  num_threads: 16
  num_sub_iterations: 2
  max_sentencepiece_length: 16
  split_by_unicode_script: 1
  split_by_numbers: 1
  split_by_whitespace: 1
  split_digits: 0
  pretokenization_delimiter:
  treat_whitespace_as_suffix: 0
  allow_whitespace_only_pieces: 0
  required_chars:
  byte_fallback: 0
  vocabulary_output_piece_score: 1
  train_extremely_large_corpus: 0
  seed_sentencepieces_file:
  hard_vocab_limit: 1
  use_all_vocab: 0
  unk_id: 0
  bos_id: 1
  eos_id: 2
  pad_id: -1
  unk_piece: <unk>
  bos_piece: <S>
  eos_piece: </S>
  pad_piece: <pad>
  unk_surface: ??
  enable_differential_privacy: 0
  differential_privacy_noise_level: 0
  differential_privacy_clipping_threshold: 0
}
normalizer_spec {
  name: nmt_nfkc
  add_dummy_prefix: 1
  remove_extra_whitespace: 1
}

```

```

1 import sentencepiece as spm
2 sp = spm.SentencePieceProcessor()
3
4 spm.SentencePieceTrainer.Train('--input=Inews1000.txt --model_prefix=Inews --vocab_size=8000')
5 #spm.SentencePieceTrainer.Train('--input=gt100.txt --model_prefix=gt100 --vocab_size=16000')
6 #spm.SentencePieceTrainer.Train('--input=ko_wiki_text.txt --model_prefix=kwiki --vocab_size=64000')
7
8 sp.load('Inews.model')

```

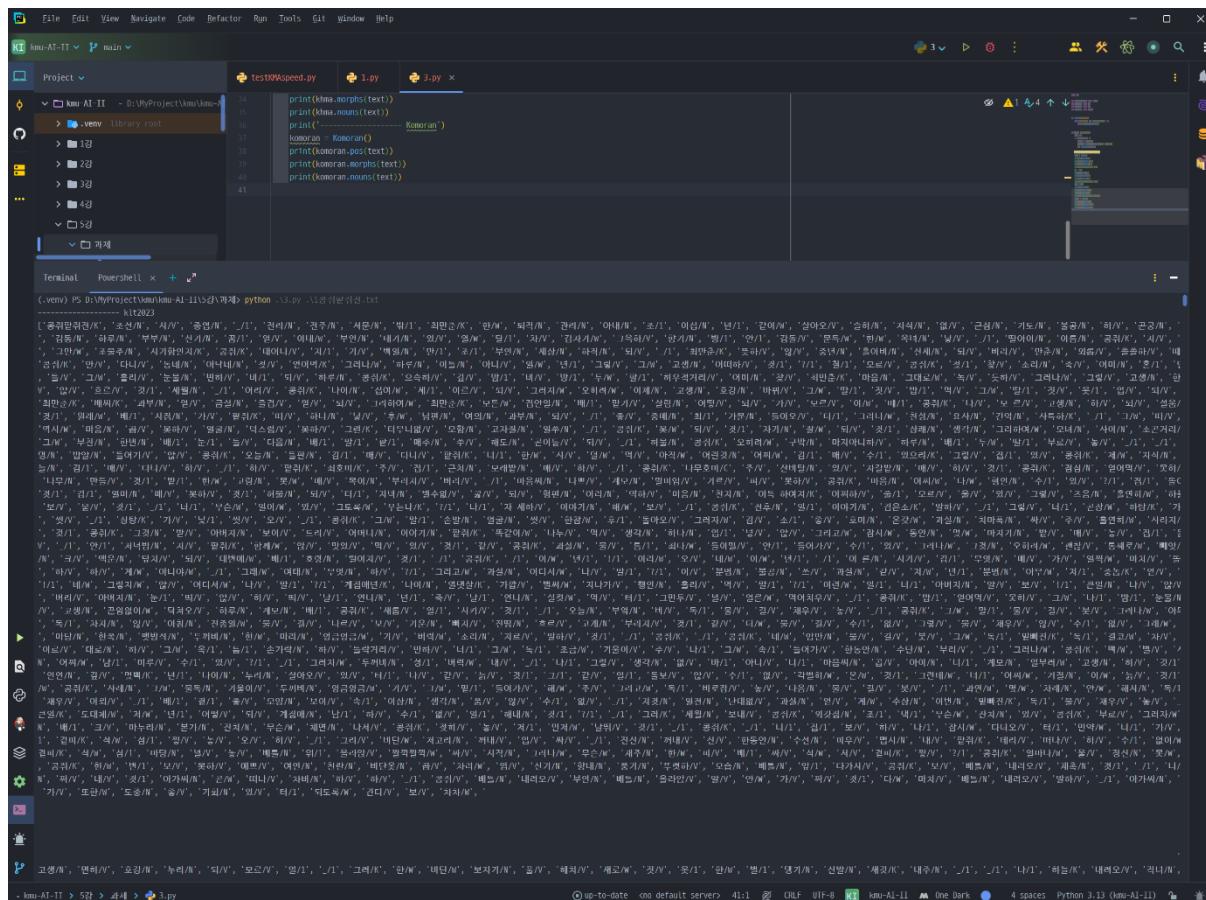
```

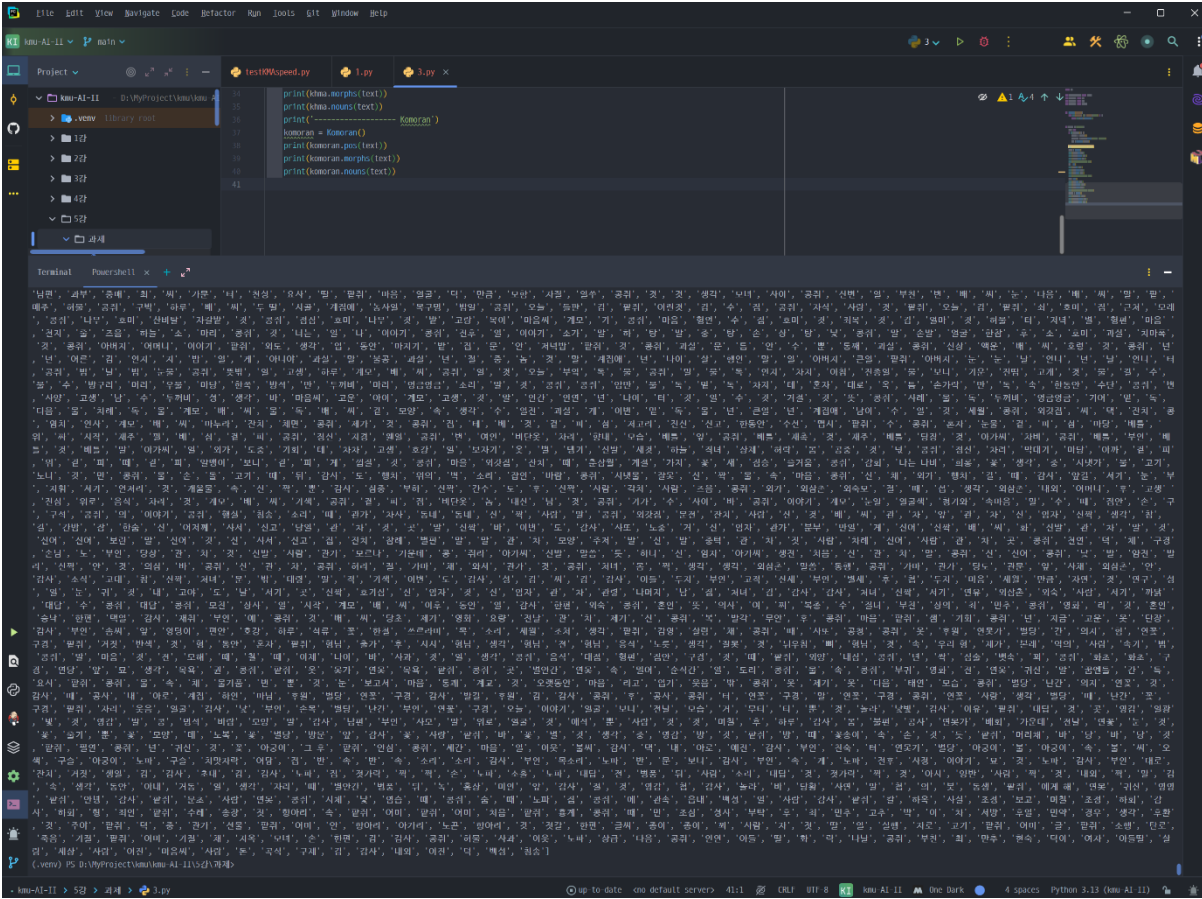
}
normalizer_spec {
  name: nmt_ofnc
  add_dummy_prefix: 1
  remove_extra_whitespace: 1
  escape_whitespace: 1
  normalization_rule_tsv:
}
denormalizer_spec {
  trainer_interface.cc(353) LOG(INFO) SentenceIterator is not specified. Using MultiFileSentenceIterator.
  trainer_interface.cc(185) LOG(INFO) Loading corpus: Inews1000.txt
  trainer_interface.cc(409) LOG(INFO) Loaded all 13708 sentences
  trainer_interface.cc(425) LOG(INFO) Adding meta_piece: <unk>
  trainer_interface.cc(425) LOG(INFO) Adding meta_piece: <eos>
  trainer_interface.cc(425) LOG(INFO) Adding meta_piece: </s>
  trainer_interface.cc(430) LOG(INFO) Normalizing Sentences...
  trainer_interface.cc(539) LOG(INFO) all chars count=1240970
  trainer_interface.cc(550) LOG(INFO) Done: 99.55% characters are covered.
  trainer_interface.cc(560) LOG(INFO) Alphabet size=1400
  trainer_interface.cc(561) LOG(INFO) Final character coverage=0.9995
  trainer_interface.cc(592) LOG(INFO) Done! preprocessed 11990 sentences.
  unigram_model_trainer.cc(265) LOG(INFO) Making suffix array...
  unigram_model_trainer.cc(269) LOG(INFO) Extracting frequent sub strings... node_num=478614
  unigram_model_trainer.cc(312) LOG(INFO) Initialized 70556 seed sentencepieces
  trainer_interface.cc(598) LOG(INFO) Tokenizing input sentences with whitespace: 11990
  trainer_interface.cc(609) LOG(INFO) Done! 90198
  unigram_model_trainer.cc(602) LOG(INFO) Using 90198 sentences for EM training
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=0 size=37902 obj=16.3766 num_tokens=221299 num_tokens/piece=5.83872
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=1 size=35037 obj=14.9972 num_tokens=232472 num_tokens/piece=6.34963
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=0 size=26274 obj=15.2302 num_tokens=232880 num_tokens/piece=8.86352
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=1 size=26262 obj=15.1597 num_tokens=232976 num_tokens/piece=8.87122
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=0 size=19696 obj=15.5268 num_tokens=246868 num_tokens/piece=12.5339
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=1 size=19694 obj=15.4518 num_tokens=246874 num_tokens/piece=12.5355
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=0 size=14769 obj=15.8639 num_tokens=261438 num_tokens/piece=17.7018
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=1 size=14769 obj=15.7748 num_tokens=261463 num_tokens/piece=17.7035
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=0 size=11076 obj=16.2608 num_tokens=277148 num_tokens/piece=25.0224
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=1 size=11076 obj=16.1676 num_tokens=277147 num_tokens/piece=25.0223
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=0 size=8000 obj=16.6585 num_tokens=289807 num_tokens/piece=32.9326
  unigram_model_trainer.cc(618) LOG(INFO) EM sub_iter=1 size=8000 obj=16.5011 num_tokens=289806 num_tokens/piece=32.9439
  trainer_interface.cc(607) LOG(INFO) Saving models: Inews.model
  trainer_interface.cc(609) LOG(INFO) Saving vocabs: Inews.vocab
  [
    '한글', '인', '권', '부', '는', '오른', '20', '열부터', '의', '배스', '의', '권', '월', '등', '내', '중', '보통', '과', '의', '마브', '등', '내원', '사실', '연', '의', '개방', '원', '연', '국', '매서', '마', '스',
    '크', '의', '작', '물', '의무', '를', '해', '체', '한다고', '보였', '습니다', '']
  [797, 228, 130, 124, 7, 453, 442, 1015, 3, 3274, 24, 130, 697, 25, 257, 171, 3305, 23, 3, 4594, 25, 715, 2405, 428, 6, 2184, 189, 490, 328, 32, 570, 54, 407, 3, 1989, 106, 3790, 8, 513, 147, 1619, 4296, 2714, 4]
  [
    '관계계역으로', '의', '것', '보', '들', '의', '원인', '생성', '형', '연공제는', 'C', 'A', 'I', '의', '것', 'G', 'P', 'T', '개방', '사', '인', '오픈', 'A', 'I', '가', '14', '일', 'C', '권지', '시간',
    '의', '다육', '감력', '배', '산', '세로', '운', '연공지능', '들', '인', 'G', 'P', 'T', '의', '4', '들', '개', '했다', '의', 'A', 'I', '개성', '을', '의', '들', '고', '구공제', '로', '한', '경쟁', '에', '트럼',
    '한', '마이크로소프트', 'C', 'MS', '의', '는', '국력', '사자', '관제', '에', 'G', 'P', 'T', '의', '4', '들', '선언', '의', '구공제', '의', '력자', '들', '의', '기', '에', '나섰다', '']
  [4227, 30, 0, 2500, 4902, 33, 5, 3, 7024, 3081, 189, 4863, 17, 406, 491, 18, 3, 0, 650, 461, 621, 92, 62, 21, 1596, 406, 491, 11, 894, 36, 17, 5040, 720, 18, 557, 892, 40, 320, 216, 89, 4863, 2791, 21, 2256, 461, 621, 206,
    108, 8, 459, 44, 4, 1827, 491, 120, 5, 3, 7971, 14, 2051, 359, 15, 434, 10, 1879, 15, 468, 17, 503, 18, 7, 4104, 591, 376, 10, 2256, 461, 621, 206, 108, 1700, 8, 3, 2783, 13, 2051, 6, 2906, 2631, 53, 41, 10, 1866, 4]
  ]
  (.venv) PS D:\MyProject\kmu-AI-II>

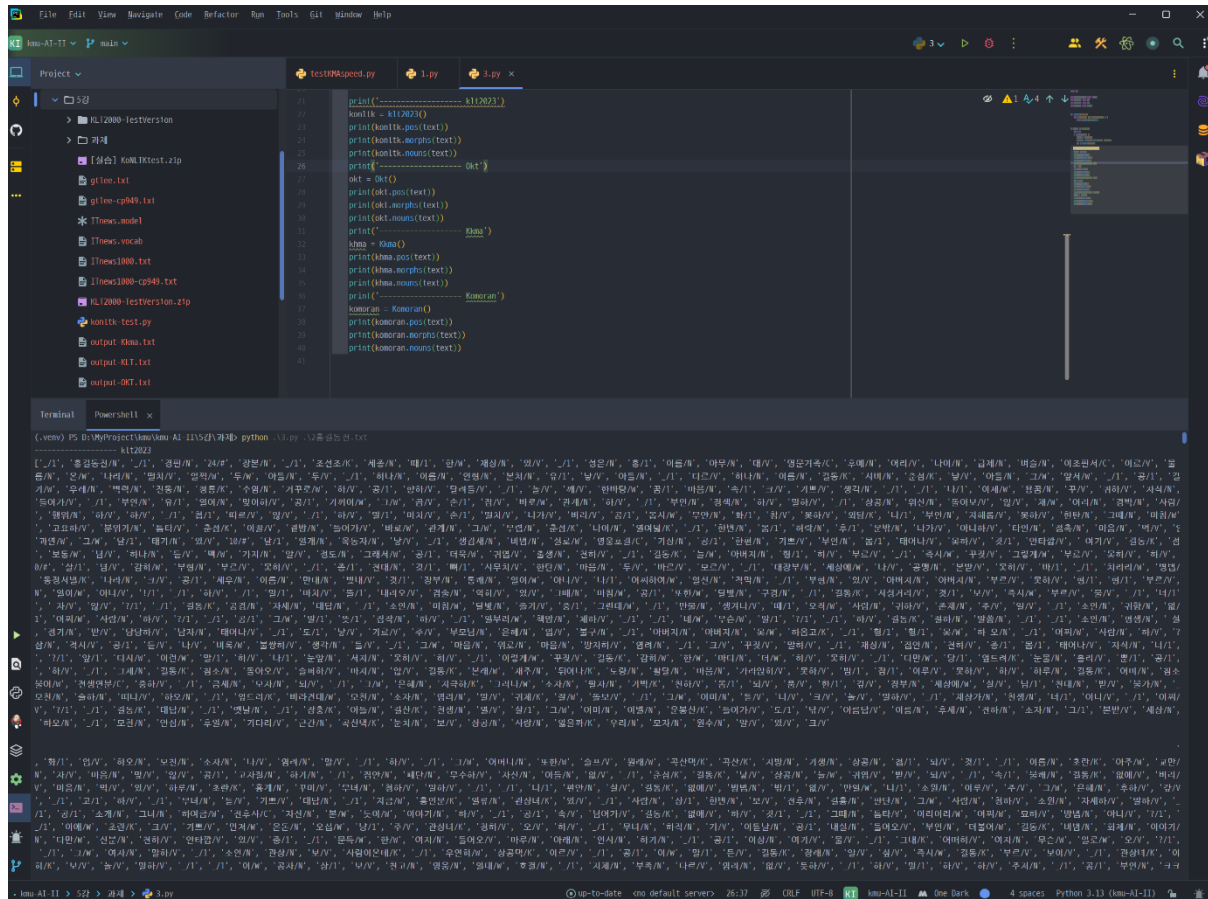
```


3. [과제1]에서 준비한 텍스트 파일에 대해 파이썬/윈도용 형태소 분석기 실습

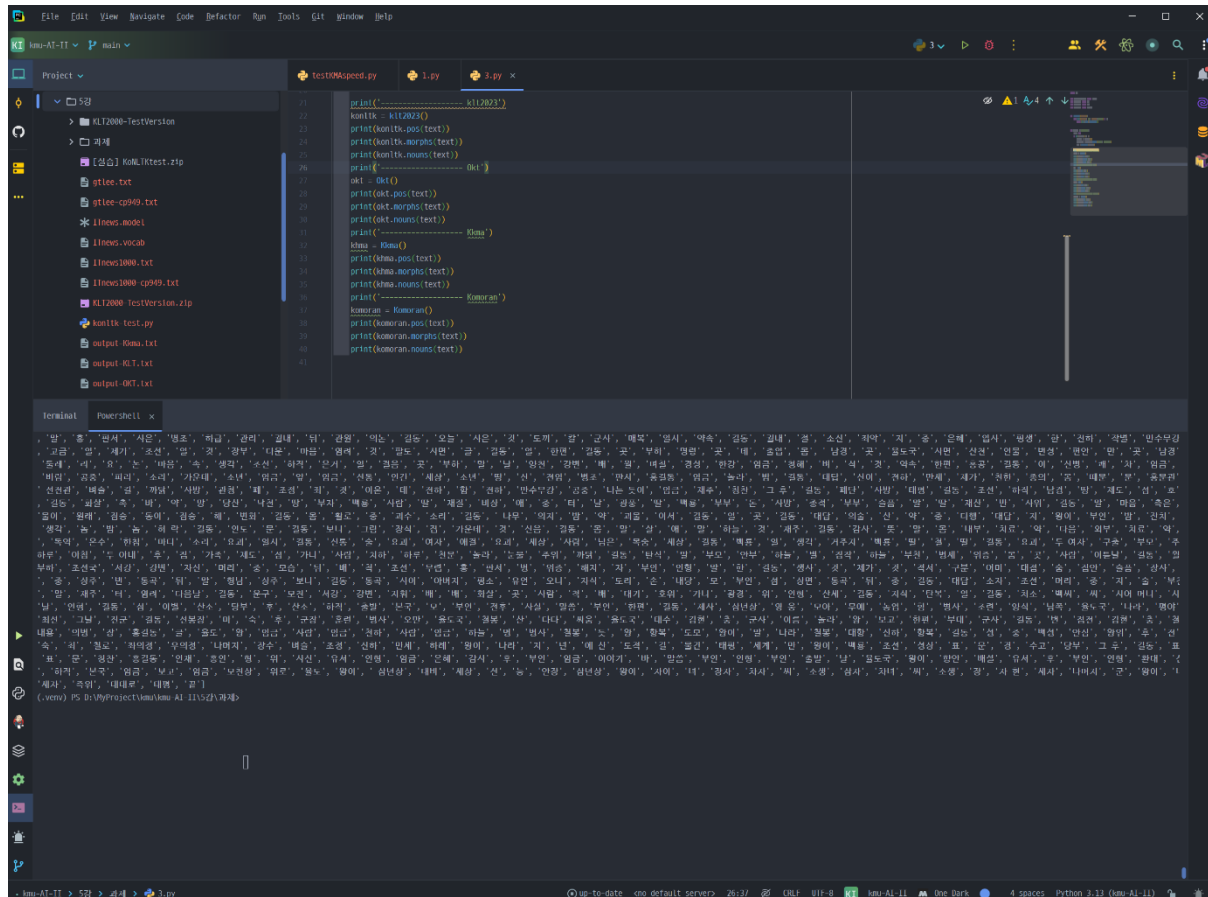
A. 파이썬 형태소 분석기(KoNLPy, KoNLTK) 실습 내용 및 실습화면 스샷







인공지능응용 K2025029 금동환



B. index2018.exe를 이용하여 윈도 cmd창에서 실습 내용 및 실행화면 스샷

```

Administrator: PowerShell
PowerShell 7.5.0
PS D:\> cd D:\MyProject\kmu\kmu-AI-II\5강\KLT2000-TestVersion\EXE
PS D:\MyProject\kmu\kmu-AI-II\5강\KLT2000-TestVersion\EXE> .\index2018.exe .\1-cp949.txt
공취팔취 전
조선 시대 중엽 전라도 전주 서문 밖 최만춘 한 퇴직 관리 아내 조 이십여 년 같이 살아왔
건만 하루 부부 자식 없애 근심 기도 불공 하고 궁궁 사람 적선 하였는데 이십여 년 사이 같이 살
열 지어 달 애지중지 차차 갑자기 그옥한 향기 방 모친 안 감돌며 문득 한 옥녀 공취 태어난 지 딸아이 이름 공취
조 부인 세상 하직 되니 최만춘 뜻하지 않게 중년 홀아비 신세 되어 버렸다 다니면서 동네 아낙네
만춘 외롭고 쓸쓸할 때면 죽은 아내 생각 눈물 흘리며 어린 공취 안고 고생 그 고생 그 돌리던 눈물
언어 먹었다 그러나 하루 죽은 어미 혼 만약 있어 들었다면 돌리는 눈물 변하여 비
는 공취 젖 찾는 소리 죽은 어미 혼 만약 있어 들었다면 돌리는 눈물 변하여 비
는 공취 젖 찾는 소리 죽은 어미 혼 만약 있어 들었다면 돌리는 눈물 변하여 비
하루 공취 으스스한 깊은 밤 빈 방 두 팔 허우적거리며 어미 찾으니 최만춘 마음 그대로 녹는
듯하였다 나이 십여 세 이르게 되었다 그 해가 오려 이제 해가 가니 쉬지 바귀어 그
공취 그 딸 지은 옷 해 되면 해 최만춘 배씨 가는지 것 과부 얻어 금실 즐거운 얻게 되었다 그리하여 최만춘 모든
진안일 배 살 말기고 살림 어떻게 되니 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된
아니면 날 보내지 못하는 신세 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된 된
원래 배 들어온 시집 갔다가 팔취 딸 하나 간악 낳은 후 남편 딸 여의 팔취 공취 과부 역시 되었네
가문 못하였다 터 그러나 천성 요사 간악 사특 그 남편 딸 여의 팔취 공취 과부 역시 되었네
지 것 상쾌 한번 배 생각 눈 그리하여 든 모녀 사이 소곤거림 말 공취 공취 공취 공취 공취 공취 공취 공취
하루 배 두 계집애 딸 불러 놓고 목구멍 밥알 들어가지 않으니 공취 오늘 들판 김 매려 다녀라
시골 사는 한 계집애 딸 동사일 물라서는 먹었고 아직 어린것 어찌 김 매려 다니도록 주어
팔취 너 자식 사랑 할 것 먹었고 아직 어린것 어찌 김 매려 다니도록 주어
공취 제 자식 사랑 할 것 먹었고 아직 어린것 어찌 김 매려 다니도록 주어
하고 팔취 쇠호미 주어 집 근처 모래밭 매게 하고 공취 나무 호미 주어 산비탈 있는 자갈밭 매게
하는 것 점심 얻어먹지 못하고 호미 나무 만든 것 공취 발 한 고랑 다 못 형언 매어서 목이 부러져 버리니
공취 마음씨 나쁜 계모 말미암아 기름 죄목 될 마음 못하는 것 공취 마음 어찌 매지 공취 보아 보아
면 별수없이 굶게 될 형편 어리 약한 마음 천지 아득하여져 공취 보아 보아
그럴 즈음 홀연히 하늘 검은 소 우는나 말하였다 마리 내려오더니 내려오더니 내려오더니
너 무슨 일이 있나 이야기 검은소 말하였다 마리 내려오더니 내려오더니 내려오더니
공취 전후 너 곧장 하탕 가서 씻고 한참 것 씻고 중탕 가서 손 씻고 상탕 가서 낫 씻고 오너라
그렇다면 그 말대로 손발 얼얼 사라져 보여 드리고 어머니 이야기 팔취 똑같이 나누어 먹겠다는 그러나 생각 하나 입
공취 치마폭 그 싸 주고는 홀연히 아버지 보여 드리고 어머니 이야기 팔취 똑같이 나누어 먹겠다는 그러나 생각 하나 입
공취 그것 받았으나 아버지 보여 드리고 어머니 이야기 팔취 똑같이 나누어 먹겠다는 그러나 생각 하나 입
불지 앉았다 그리고 잠시 동안 몇 마지기 밭을 매어 맛있게 먹고
달려 있었고 안 저녁밥 지어 팔취 함께 앉아

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Administrator: PowerShell
PS D:\MyProject\kmu\kmu-AI-II\5강\KLT2000-TestVersion\EXE> .\index2018.exe .\2-cp949.txt
홍길동전 24장본 있었으니 성은 홍 이름 아무 대명문 거족 후예 어린 나이
조선조 세종 때 이조 판서 이르렀다 이름 조아 본처 으름 충효 낳은 갖추어 다른 이름 하나 거족 온 나라 멀쳤다 시비 일찍
두는 아들 두었는데 하나 이름 물망 인형 본처 유 낳은 아들 다른 명문 이름 하나 거족 온 나라 멀쳤다 시비 일찍
그 앞서 공이 길동 낳기 전 한 꿈 꾸었다 갑자기 우리 벽력 진동 청룡 수염 거꾸로 하고
공 옹공 향하여 꾸었으니 공이 길동 낳기 전 한 꿈 꾸었다 갑자기 우리 벽력 진동 청룡 수염 거꾸로 하고
맞이하였다 상공 위신 돌아보지도 않은 채 잡고 어리 바로 경박 사람 비루 행위 하고자 정색 하시니
니다 하며 말 마치고는 손 떨치고 나가 버렸다 공 몹시 무안 화 참지 못하고 외당 나 부인
지혜롭지 마침 못함 한탄 차 올리기 그 고요한 분위기 틈타 춘섬 이끌고 결방 들어가 바로 관계 그
그때 무렵 춘섬 나이 기특하게 여덟 살이었더니 10달 태어나자 보통 아버지 못하고 춘섬 나가지 결방 들어가 바로 관계 그
과연 그 한편 점점 자라 8살 출생 천해 감히 부형 부르지 못하고 춘섬 나가지 결방 들어가 바로 관계 그
공 길동 더욱 귀여워하 살 10살 돌렸대장부 세상에 나서 공 맹세우 본받지 못할 바 빌내는 차라리 병법 익혀 대장인 하리춘 비스듬히 차고 동정서
바를 대장부 세상에 나서 공 맹세우 본받지 못할 바 빌내는 차라리 병법 익혀 대장인 하리춘 비스듬히 차고 동정서
별하여 나라 큰 부형 일이 마치며 돌 내려와 검술 구경 밤 익히고 있었다 서성거리는 것 보고 즉시 불려 물었다
일신 어찌 말 마침 너 공경 자세 대답 달빛 즐기는 중 그런데 만물 생겨날 때 오직 사람 귀한 존재 출 아읍니다만
그때 마침 너 공경 자세 대답 달빛 즐기는 중 그런데 만물 생겨날 때 오직 사람 귀한 존재 출 아읍니다만
길동은 공경 소인 귀함 말 무슨 평생 설위하는 바 아버지 공이 꾸짖어 못하게 하디 슬퍼해 했다
“소인 귀함 말 무슨 평생 설위하는 바 아버지 공이 꾸짖어 못하게 하디 슬퍼해 했다
“소인 귀함 말 무슨 평생 설위하는 바 아버지 공이 꾸짖어 못하게 하디 슬퍼해 했다
주신 부모님 은혜 흘리며 염려한 눈앞은 하자 못해 밤 침소 가
하고 눈물 방자 재상 하면 꾸짖으니 하자 못해 밤 침소 가
마 이렇게 물러가라 가라앉히지 하루 길동

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