PYTHON: LOADING & PARSING TEXT DATA

9.2.2020

ANACONDA INSTALL?

FOR LOOP

* words = [“this”, “is”, “a”, “list”]

* for w in words:
    print(w)

FOR LOOP

* words = [“this”, “is”, “a”, “list”]

*
```
for w in words:
    print(w)
```

*
```
for index in range(len(words)):
    print(words[i])
```

OBJECT METHODS

* *Everything in python is an **object***

* *Objects have "methods"—functions that are attached to that object*

* *You can access methods (and other object "attributes") using the* `.` *syntax:*

  * *e.g.* `my_variable.some_method()`

READING A TEXT FILE

* f = open(“data_file.txt”)
  * *the file object acts like a pointer into the file*
* f.readline() *- returns the next line*
* f.read() *- returns the rest of the file*
* *Details: https://docs.python.org/3/library/functions.html#open*

STRING SPLITTING

* s = “this is a string”
* s.split() -> [“this”, “is”, “a”, “string”]
  * *splits on whitespace by default*
  * *Details: https://docs.python.org/3/library/stdtypes.html#str*

LIST APPEND

* my_list = [“wow”]

* my_list.append(“such”) - *add “such” to list*
  my_list.append(“list”) - *add “list” to list*

* print(my_list)
  => [“wow”, “such”, “list”]

THE PROBLEM

* We need to parse a text file (labels.txt) that contains labels for 7200 stimuli used in our experiment

  * Each line looks like this:

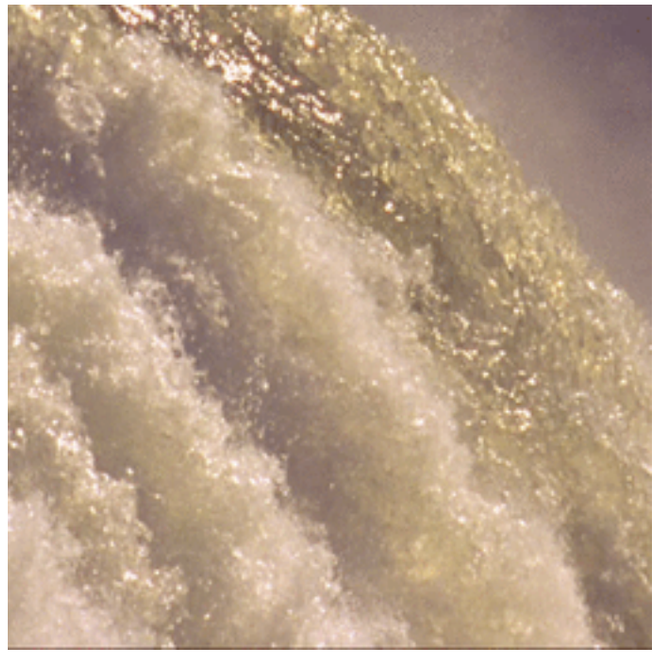
15 ani16.gif text.n.01 shelf.n.01 sweater.n.01 hand.n.01

index

video clip filename

object/action labels

VISUAL SEMANTICS



horseman
horse
walk
road
spectator
mountain

THE PROBLEM

* What kind of data structure do we want the result to be in?

* It should be easy for us to use later

* It should be ~obvious what’s going on

THE SOLUTION

* Let’s read the file line-by-line, turn each line into a dictionary, and put all the dictionaries in a list

* *See parse_labels.py in this lecture directory for a demo of how this works*

THAT'S ALL, FOLKS!