Reg Ex CheatSheet Cheat Sheet

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Regex

(*) indicates that the preceding character can occur 0 or more times.	meo*w	mew, meow, meooow, and meoooo-oooooooow
? - character can appear either 0 or 1 time	humou?r	humour humor
. and it can match any single character (letter, number, symbol or whitespace) in a piece of text	.....	any 9-character text
[] will match any of the characters included within the brackets	con[sc]en[sc]us	consensus, concensus, consencus, and concencus
{} contains the exact quantity	roa{3}r	roaaar
{}n. the quantity range of characters to be matched	roa{3,6}r	roaaar, roaaaar, roaaaaar, or roaaaaaar
|, allows for the matching of either of two subexpressions.	baboons|gorillas	will match the text baboons as well as the text gorillas.

Regex (cont)

Anchors (hat ^ and dollar sign $) are used in regular expressions to match text at the start and end of a string, respectively.	^Monkeys: my mortal enemy$	will completely match the text Monkeys: my mortal enemy but not match Spider Monkeys: my mortal enemy or Monkeys: my mortal enemy in the wild
[letter-letter] or [n-n]	a range of characters that can be matched	[A-Z]. : match any uppercase letter [a-z]. : match any lowercase letter [0-9]. : match any digit [A-Za-z] : match any uppercase or lowercase letter
Shorthand character classes simplify writing regular expressions	\w represents the regex range [A-Za-z0-9_], \d represents [0-9],	\W represents [^A-Za-z0-9_] matching any character not included by \w, \D represents [^0-9] matching any character not included by \d

Regex (cont)

Negated character set	[^cdh]are	will match the m in mare.
+ ndicates that the preceding character can occur 1 or more times	meo+w	will match meow, meooow, and meoooo-ooo-ooooow, but not match mew

Text Preprocessing

Noise removal	import re result = re.sub(r'[\.\?-\!\,\:\;\"]', '', text)	Removes Punctuation
Tokenization is the text preprocessing task of breaking up text into smaller components of text	from nltk.tokenize import word_tokenize text = "This is a text to tokenize" tokenized = word_tokenize(text)	print(tokenized) # ["This", "-is", "a", "-text", "to", "tokenize"]
In natural language processing, normalization encompasses many text preprocessing tasks including	stemming, lemmatization,	upper or lowercasing, and stopwords removal.

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Text Preprocessing (cont)

Stemming In natural language processing, stemming is the text preprocessing normalization task concerned with bluntly removing word affixes (prefixes and suffixes).	from nltk.stem import PorterStemmer tokenized = ["So", "many", "squids", "are", "jumping"] stemmer = PorterStemmer() stemmed = [stemmer.stem(token) for token in tokenized]	# ['So', 'mani', 'squid', 'are', 'jump']
Lemmatization In natural language processing, lemmatization is the text preprocessing normalization task concerned with bringing words down to their root forms.	from nltk.stem import WordNetLemmatizer tokenized = ["So", "many", "squids", "are", "jumping"] lemmatizer = WordNetLemmatizer() lemmatized = [lemmatizer.lemmatize(token) for token in tokenized]	['So', 'many', 'squid', 'be', 'jump']

Text Preprocessing (cont)

stopword removal is the process of removing words from a string that don't provide any information about the tone of a statement.	from nltk.corpus import stopwords # define set of English stopwords stop_words = set(stopwords.words('english'))	# remove stopwords from tokens in dataset statement_no_stop = [word for word in word_tokens if word not in stop_words]
parser.chunk.RegexpParser	Uses a set of regular expression patterns to specify the behavior of the parser	{<DT|JJ>} # chunk determiners and adjectives

Token = Smaller Component of Text
Stem = Remove prefix and suffix
Lemmatization = Bring down to root
Stopword = Remove meaningless

Lists and Strings

z = 'Natural Language Processing'	z.replace(' ', '\n')	'Natural\nLanguage\nProcessing'
	list(z)	Split text into character tokens
	set(z)	Unique tokens
x = ['Natural', 'Language', 'Toolkit']	x.insert(0, 'Python')	['Language', 'Natural', 'Python', 'Toolkit']