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# Cписок терминов

Apache Spark — фреймворк с открытым исходным кодом для реализации распределённой обработки неструктурированных и слабоструктурированных данных, входящий в экосистему проектов Hadoop.

Hadoop — проект фонда Apache Software Foundation, свободно распространяемый набор утилит, библиотек и фреймворк для разработки и выполнения распределённых программ, работающих на кластерах из сотен и тысяч узлов. Используется для реализации поисковых и контекстных механизмов многих высоконагруженных веб-сайтов, в том числе, для Yahoo! и Facebook.

MapReduce — модель распределённых вычислений, представленная компанией Google, используемая для параллельных вычислений над очень большими, вплоть до нескольких петабайт, наборами данных в компьютерных кластерах. Работа MapReduce состоит из двух шагов: Map и Reduce, названных так по аналогии с одноименными функциями высшего порядка, map и reduce.

RDD — распределенный набор данных, базовая абстракция в Apache Spark. Представляет собой неизменяемую, распределенную коллекцию элементов, операции над которыми могут проводиться параллельно.

Кластер — группа компьютеров, объединённых высокоскоростными каналами связи и представляющая с точки зрения пользователя единый аппаратный ресурс.

Фре́ймворк — программная платформа, определяющая структуру программной системы; программное обеспечение, облегчающее разработку и объединение разных компонентов большого программного проекта.

# Исследование и анализ текстов

Контент-анализ — стандартный метод исследования в области общественных наук, предметом анализа которого является содержание текстовых массивов и продуктовкоммуникативной корреспонденции.

В отечественной исследовательской традиции контент-анализ определяется как количественный анализ текстов и текстовых массивов с целью последующей содержательной интерпретации выявленных числовых закономерностей. Контент-анализ применяется при изучении источников, инвариантных по структуре или существу содержания, но внешне бытующих, как несистематизированный, беспорядочно организованный текстовый материал. Философский смысл контент-анализа как исследовательского метода состоит в восхождении от многообразия текстового материала к абстрактной модели содержания текста.

Выделяют два основных типа контент-анализа: количественный и качественный. Количественный контент-анализ характеризуется частотой появления в тексте определенных характеристик. Качественный контент-анализ ориентирован на учет сочетания качественных и количественных показателей, наиболее эффективен для выявления явных или скрытых целей субъекта.

Данная работа сосредоточена на автоматическом анализе текста с целью определения его сложности.

Известно, что неоправданно длинные предложения или сложные лексические конструкции затрудняют восприятие текста документа, поэтому требования к стилю написания текста содержат положения о его краткости и лаконичности. Однако для объективной количественной оценки сложности текста документа, позволяющей прогнозировать эффект от подготавливаемого текста, необходим обоснованный выбор и программная реализация соответствующего метода, адекватного его языку и стилистике.

Рассмотрим основные подходы к определению сложности текста.

Под сложностью, в общем случае, понимают составленностъ объекта из нескольких частей; многообразность по составу входящих элементов и связей между ними. Синонимами данного понятия являются трудность, запутанность. Соответственно, состоящий из множества элементов, объединенных различного рода связями, текст описывается такой характеристикой, как сложность.

В XX веке при рассмотрении понятия сложности текста оперировали такими синонимичными понятиями, как удобочитаемость, читабельность, трудность текста и благозвучие. Они отражают, насколько удобным для зрительного либо слухового восприятия является текст, а факторами выступают размер букв, цвет шрифта и фона, наличие жаргонизмов и неологизмов и т.п. Однако такой подход к сложности текста не позволяет оценить содержание текста, его структуру и характеристики. Кроме того, исследования сложности текста во многом велись психологами, которые учитывали личностные характеристики понимающего субъекта при оценке природы текста и характера его понимания.

С началом XXI века при описании сложности текста стал превалировать подход, оперирующий общей идеей понимания сложности как количества затрачиваемых ресурсов для описания какого-либо объекта. Сложность языковой системы противопоставляется стоимости и трудности. В терминах работы сложности текста соответствует абсолютная (объективная) сложность, зависящая от выбранного подхода к ее оценке, а стоимости и трудности - относительная (субъективная) сложность. Впрочем, выделение субъективных и объективных факторов сложности текста довольно условно. Например, информативность и абстрактность текста могут быть оценены как относительно, так и безотносительно к субъекту, рис. 1.

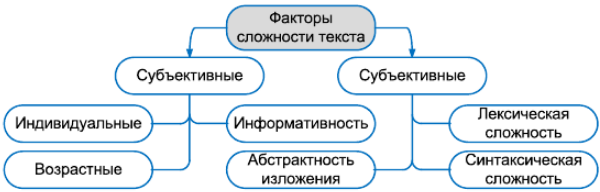


Рисунок - факторы сложности текста

Тем не менее, объективно текст можно рассматривать на нескольких уровнях, для каждого из которых задаются различные числовые показатели, являющиеся основой практической оценки сложности:

1. Синтаксический уровень
   1. Средняя длина абзаца в предложениях
   2. Средняя длина абзаца в словах
   3. Средняя длина абзаца в буквах
   4. Средняя длина предложения в словах
   5. Средняя длина предложения в буквах
2. Лексический уровень
   1. Средняя длина слова в буквах
   2. Процент неповторяющихся слов
   3. Средняя частота повторения слова
   4. Процент частей речи

На основании этих метрик рассчитываются многие показатели, такие как индекс Флэша и др.

# Применение Apache Spark для работы с текстом

Проект Apache Spark предназначен для обработки неструктурированных и слабоструктурированных данных. В отличие от классического обработчика из ядра Hadoop, реализующего двухуровневую концепцию MapReduce с дисковым хранилищем, Spark использует специализированные примитивы для рекуррентной обработки в оперативной памяти, благодаря чему позволяет получать значительный выигрыш в скорости работы для некоторых классов задач, в частности, возможность многократного доступа к загруженным в память пользовательским данным делает библиотеку привлекательной для алгоритмов машинного обучения.

Проект предоставляет программные интерфейсы для языков Java, Scala, Python, R. Изначально написан на Scala, впоследствии добавлена существенная часть кода на Java для предоставления возможности написания программ непосредственно на Java. Состоит из ядра и нескольких расширений, таких как Spark SQL (позволяет выполнять SQL-запросы над данными), Spark Streaming (надстройка для обработки потоковых данных), Spark MLlib (набор библиотек машинного обучения), GraphX (предназначено для распределённой обработки графов). Может работать как в среде кластера Hadoop под управлением YARN, так и без компонентов ядра Hadoop, поддерживает несколько распределённых систем хранения — HDFS, OpenStack Swift, NoSQL-СУБД Cassandra, Amazon S3.

В Spark существуют следующие абстракции для работы с данными:

RDD (Resilient Distributed Dataset) - основная абстракция для работы с данными, является низкоуровневой.

DataFrame - модернизация RDD, позволяющая работать с коллекцией данных в стиле SQL. используется в Python и R.

При работе с текстовой информации в Spark в большинстве случаев используют цепочку преобразований RDD, состоящую из преобразований filter, map и reduce. Spark выполняет эти преобразования ровно в той последовательности, в которой они были указаны в коде. Подход с использованием RDD проигрывает в производительности подходу с использованием DataFrame (т.к. до применения пребразований DataFrame срабатывает оптимизатор), однако предоставляет больше возможностей вследствие отсутствия ограничений SQL.

# Разработка программы для расчета показателей

В ходе работы была разработана программа, позволяющая рассчитывать следующие количественные показатели англоязычного текста:

1. Индекс Флеша (индекс удобочитаемости текста)
2. Процент уникальных слов
3. Средняя частота повторения слова
4. Процент существительных
5. Процент глаголов
6. Процент прилагательных
7. Средняя длина абзаца в предложениях
8. Средняя длина абзаца в словах
9. Средняя длина абзаца в буквах
10. Средняя длина предложения в слова
11. Средняя длина предложения в буквах
12. Средняя длина слова

Индекс Флеша для англоязычного текста рассчитывается по формуле

FRE = 206,835 − 1,015 × ASL − 84,6 × ASW,

где:

ASL — средняя длина предложения в словах (англ. average sentence length),

ASW — средняя длина слова в слогах (англ. average number of syllables per word)

Индекс по шкале FRES (англ. Flesch reading ease scale) распределяется таким образом:

100: очень легко читается. Средняя длина предложения составляет 12 или менее слов. Нет слов из более чем 2 слогов.

65: простой английский язык. Средняя длина предложения составляет от 15 до 20 слов. В среднем слова имеют 2 слога.

30: немного трудно читать. Предложения содержат до 25 слов. Обычно, двусложные слова.

0: очень трудно читать. В среднем предложение имеет 37 слов. Слово имеет в среднем более 2 слогов.

В качестве исходных данных были взяты следующие ресурсы:

1. Первая глава англоязычной версии книги «Преступление и наказание»
2. Первая глава книги «Алиса в стране чудес»
3. Новостная статья «Nasa Moon rocket core leaves for testing» от BBC
4. Текстовая версия аудио-подкаста «Time Is One of the Great Mysteries», предназначенного для изучения английского языка.

На основании этих данных получены следующие результаты:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Наименование текста | | Автор | | Тип текста | Индекс Флеша |
| Crime and Punishment | | F. Dostoevskiy | | Literature | 59,91 |
| Nasa Moon rocket core leaves for testing | | P. Rincon | | News | 50,12 |
| Alice's Adventures in Wonderland | | L. Carroll | | Literature | 57,5 |
| Time Is One of the Great Mysteries | | J. Simms | | Learning English podcast | 70,55 |
| Наименование текста | | **Процент уникальных слов** | | **Средняя частота повторения слова** | |
| Crime and Punishment | | 0,38 | | 2,65 | |
| Nasa Moon rocket core leaves for testing | | 0,47 | | 2,12 | |
| Alice's Adventures in Wonderland | | 0,27 | | 3,74 | |
| Time Is One of the Great Mysteries | | 0,32 | | 3,13 | |
|  | |  | |  | |
| Наименование текста | **Процент существительных** | | **Процент глаголов** | | **Процент прилагательных** |
| Crime and Punishment | 0,71 | | 0,09 | | 0,07 |
| Nasa Moon rocket core leaves for testing | 0,72 | | 0,07 | | 0,05 |
| Alice's Adventures in Wonderland | 0,73 | | 0,1 | | 0,07 |
| Time Is One of the Great Mysteries | 0,72 | | 0,1 | | 0,08 |

|  |  |  |  |
| --- | --- | --- | --- |
| Наименование текста | Средняя длина абзаца в предложениях | Средняя длина абзаца в словах | Средняя длина абзаца в буквах |
| Crime and Punishment | 6,91 | 178,82 | 661 |
| Nasa Moon rocket core leaves for testing | 1,3 | 30,91 | 124,91 |
| Alice's Adventures in Wonderland | 2,75 | 108,12 | 358,17 |
| Time Is One of the Great Mysteries | 3,53 | 44,67 | 168,61 |
| Наименование текста | **Средняя длина предложения в словах** | **Средняя длина предложения в буквах** | **Средняя длина слова** |
| Crime and Punishment | 25,88 | 95,67 | 4,22 |
| Nasa Moon rocket core leaves for testing | 23,7 | 95,77 | 4,52 |
| Alice's Adventures in Wonderland | 39,32 | 130,24 | 3,78 |
| Time Is One of the Great Mysteries | 12,66 | 47,8 | 4,27 |

Из предоставленных выше таблиц видно, что наиболее высокий индекс читаемости получила текстовая версия аудио-подкаста «Time Is One of the Great Mysteries», предназначенного для изучения английского языка. Это логично, т.к. она направлена на неподготовленную аудиторию.

Наименьший индекс читаемости получила новостная статья от BBC. Скорее всего, это связано с тем, что она написана деловым языком и направлена на узкую аудиторию.

Помимо этого, из полученных данных можно сказать, что соотношение членов предложений в английском языке в целом совпадает для текстовой информации разных жанров (различие не превышает 3%). При этом большую часть слов составляют существительные (в среднем 72%).

Исходный код программы предоставлен ниже.

*# coding=utf-8***import** nltk  
**import** syllables  
**from** nltk.tag **import** pos\_tag, map\_tag  
  
**import** string  
**from** pyspark.context **import** SparkContext  
**from** nltk.tokenize **import** word\_tokenize  
**from** nltk.tokenize **import** sent\_tokenize  
**from** nltk.corpus **import** stopwords  
  
**from** TextComplexity **import** TextComplexity  
  
nltk.download(**"punkt"**)  
nltk.download(**"stopwords"**)  
nltk.download(**'averaged\_perceptron\_tagger'**)  
nltk.download(**'wordnet'**)  
nltk.download(**'universal\_tagset'**)  
  
sc = SparkContext()  
stopwords = set(stopwords.words(**"english"**))  
punctuation = list(string.punctuation)  
  
  
**def** main():  
 *# http://dostoevskiy-lit.ru/dostoevskiy/foreign/crime-and-punishment/1-chapter-one.htm* crime\_and\_punishment\_model = get\_text\_complexity(sc.textFile(**"data/crime\_and\_punishment.txt"**))  
 crime\_and\_punishment\_model.text\_name = **"Crime and Punishment"** crime\_and\_punishment\_model.type = **"Literature"** crime\_and\_punishment\_model.author = **"F. Dostoevskiy"** crime\_and\_punishment\_model.href = **"http://dostoevskiy-lit.ru/dostoevskiy/foreign/crime-and-punishment/1-chapter-one.htm"** *# http://dostoevskiy-lit.ru/dostoevskiy/foreign/crime-and-punishment/1-chapter-one.htm* alice\_in\_wonderland\_model = get\_text\_complexity(sc.textFile(**"data/alice\_in\_wonderland.txt"**))  
 alice\_in\_wonderland\_model.text\_name = **"Alice's Adventures in Wonderland"** alice\_in\_wonderland\_model.type = **"Literature"** alice\_in\_wonderland\_model.author = **"L. Carroll"** alice\_in\_wonderland\_model.href = **"https://www.gutenberg.org/files/11/11-h/11-h.htm"** bbc\_nasa\_moon\_rocket\_model = get\_text\_complexity(sc.textFile(**"data/bbc\_nasa\_moon\_rocket.txt"**))  
 bbc\_nasa\_moon\_rocket\_model.text\_name = **"Nasa Moon rocket core leaves for testing"** bbc\_nasa\_moon\_rocket\_model.type = **"News"** bbc\_nasa\_moon\_rocket\_model.author = **"P. Rincon"** bbc\_nasa\_moon\_rocket\_model.href = **"https://www.bbc.com/news/science-environment-51048986"** time\_is\_one\_of\_the\_great\_mysteries = get\_text\_complexity(sc.textFile(**"data/time\_is\_one\_of\_the\_great\_mysteries.txt"**))  
 time\_is\_one\_of\_the\_great\_mysteries.text\_name = **"Time Is One of the Great Mysteries"** time\_is\_one\_of\_the\_great\_mysteries.type = **"Learning English podcast"** time\_is\_one\_of\_the\_great\_mysteries.author = **"J. Simms"** time\_is\_one\_of\_the\_great\_mysteries.href = **"https://learningenglish.voanews.com/a/time-clock-calendar/1819679.html"** TextComplexity.save\_to\_csv(**"data/output.csv"**, [crime\_and\_punishment\_model,  
 bbc\_nasa\_moon\_rocket\_model,  
 alice\_in\_wonderland\_model,  
 time\_is\_one\_of\_the\_great\_mysteries])  
  
  
**def** get\_text\_complexity(text):  
 model = TextComplexity()  
  
 paragraphs = text \  
 .filter(not\_linebreak) \  
 .map(**lambda** str: str.lower())  
  
 model.avg\_paragraph\_len\_in\_letters = avg\_len\_in\_letters(paragraphs)  
 model.avg\_paragraph\_len\_in\_words = avg\_len\_in\_words(paragraphs)  
 model.avg\_paragraph\_len\_in\_sentences = avg\_len\_in\_sentences(paragraphs)  
  
 sentences = paragraphs.flatMap(sent\_tokenize)  
  
 model.avg\_sentence\_len\_in\_letters = avg\_len\_in\_letters(sentences)  
 model.avg\_sentence\_len\_in\_words = avg\_len\_in\_words(sentences)  
  
 words = sentences \  
 .flatMap(word\_tokenize) \  
 .filter(**lambda** word: word **not in** string.punctuation **and** word != **"..."**)  
  
 model.avg\_word\_len = avg\_len\_in\_letters(words)  
 model.percent\_of\_unique\_words = percent\_of\_unique\_words(words)  
 model.avg\_term\_frequency = avg\_term\_frequency(words)  
  
 parts\_of\_speech = part\_of\_speech\_percent(words)  
 model.nouns\_percent = parts\_of\_speech[**"NOUN"**]  
 model.verbs\_percent = parts\_of\_speech[**"VERB"**]  
 model.adverbs\_percent = parts\_of\_speech[**"ADV"**]  
 model.adjectives\_percent = parts\_of\_speech[**"ADJ"**]  
  
 model.Flesch\_index = calculateFRE(sentences, words)  
 **return** model  
  
  
**def** calculateFRE(sentences, words):  
 words\_count = words.count()  
 syllables\_count = words.map(syllables.estimate) \  
 .reduce(**lambda** a, x: a + x)  
 **return** 206.835 - 1.015 \* float(words\_count) / sentences.count() - 84.6 \* float(syllables\_count) / words\_count  
  
  
**def** part\_of\_speech\_percent(words):  
 count = words.count()  
 result = words \  
 .map(part\_of\_speech) \  
 .countByValue()  
 **for** key, val **in** result.items():  
 result[key] = float(val) / count  
 **return** result  
  
  
**def** part\_of\_speech(text):  
 posTagged = pos\_tag(text)  
 simplifiedTags = [(word, map\_tag(**'en-ptb'**, **'universal'**, tag)) **for** word, tag **in** posTagged]  
 **return** simplifiedTags[0][1]  
  
  
**def** percent\_of\_unique\_words(words):  
 unique\_count = words.distinct().count()  
 total\_count = words.count()  
 **return** float(unique\_count) / total\_count  
  
  
**def** avg\_term\_frequency(words):  
 term\_frequency = words.countByValue()  
 **return** float(reduce(sum, term\_frequency.values())) / term\_frequency.\_\_len\_\_()  
  
  
**def** avg\_len(text\_array, transform\_func):  
 lengths = text\_array \  
 .map(transform\_func) \  
 .map(**lambda** x: x.\_\_len\_\_()) \  
 .collect()  
  
 **return** float(reduce(sum, lengths)) \  
 / lengths.\_\_len\_\_()  
  
  
**def** avg\_len\_in\_letters(text\_array):  
 **return** avg\_len(text\_array, remove\_non\_letters)  
  
  
**def** avg\_len\_in\_words(text\_array):  
 **return** avg\_len(text\_array, word\_tokenize)  
  
  
**def** avg\_len\_in\_sentences(text\_array):  
 **return** avg\_len(text\_array, sent\_tokenize)  
  
  
**def** not\_linebreak(string):  
 **return** string != **"\n" and** string != **"\r\n" and** string != **""  
  
  
def** remove\_non\_letters(str):  
 **return** filter(**lambda** x: x **in** string.ascii\_letters, str)  
  
  
**def** sum(a, b):  
 **return** a + b  
  
  
**if** \_\_name\_\_ == **"\_\_main\_\_"**:  
 main()

*# coding=utf-8***import** csv  
  
  
**class** TextComplexity:  
 **def** \_\_init\_\_(self):  
 **pass** text\_name = None  
 author = None  
 href = None  
 type = None  
  
 Flesch\_index = None  
  
 percent\_of\_unique\_words = None  
 avg\_term\_frequency = None  
  
 nouns\_percent = None  
 verbs\_percent = None  
 adjectives\_percent = None  
  
 avg\_paragraph\_len\_in\_letters = None  
 avg\_paragraph\_len\_in\_words = None  
 avg\_paragraph\_len\_in\_sentences = None  
 avg\_sentence\_len\_in\_letters = None  
 avg\_sentence\_len\_in\_words = None  
 avg\_word\_len = None  
  
 **def** get\_values(self):  
 **return** [self.text\_name,  
 self.author,  
 self.type,  
 **'%.2f'** % self.Flesch\_index,  
 **'%.2f'** % self.percent\_of\_unique\_words,  
 **'%.2f'** % self.avg\_term\_frequency,  
 **'%.2f'** % self.nouns\_percent,  
 **'%.2f'** % self.verbs\_percent,  
 **'%.2f'** % self.adjectives\_percent,  
 **'%.2f'** % self.avg\_paragraph\_len\_in\_sentences,  
 **'%.2f'** % self.avg\_paragraph\_len\_in\_words,  
 **'%.2f'** % self.avg\_paragraph\_len\_in\_letters,  
 **'%.2f'** % self.avg\_sentence\_len\_in\_words,  
 **'%.2f'** % self.avg\_sentence\_len\_in\_letters,  
 **'%.2f'** % self.avg\_word\_len,  
 self.href]  
  
 @staticmethod  
 **def** get\_names():  
 **return** [**'Наименование текста'**,  
 **'Автор'**,  
 **'Тип текста'**,  
 **'Индекс Флеша'**,  
 **'Процент уникальных слов'**,  
 **'Средняя частота повторения слова'**,  
 **'Процент существительных'**,  
 **'Процент глаголов'**,  
 **'Процент прилагательных'**,  
 **'Средняя длина абзаца в предложениях'**,  
 **'Средняя длина абзаца в словах'**,  
 **'Средняя длина абзаца в буквах'**,  
 **'Средняя длина предложения в словах'**,  
 **'Средняя длина предложения в буквах'**,  
 **'Средняя длина слова'**,  
 **'Ссылка на интернет-ресурс'**]  
  
 @staticmethod  
 **def** save\_to\_csv(path, list):  
 **with** open(path, **'wb'**, ) **as** csvfile:  
 writer = csv.writer(csvfile)  
 writer.writerow(TextComplexity.get\_names())  
 **for** item **in** list:  
 writer.writerow(item.get\_values())

# Заключение

В результате выполненной работы были получены навыки по исследованию и анализу текстов с использованием среды Apache Spark.

Были получены знания о способах количественного анализа текста, изучены основные характеристики текста, а также способы формирования индекса удобочитаемости.

Для решения проблемы анализа текста была написана программа на языке Python, которая позволяет рассчитать количественные характеристики для произвольного текста, а также получить индекс удобочитаемости и выгрузить эти данные в формате csv.

Наиболее читаемым текстом, согласно индексу Флэша, оказался материал для изучения английского языка, что логично. Помимо этого, были замечены некоторые интересные особенности текста на английском языке, такие как неизменность распределения частей речи вне зависимости от жанра текста. Точность результатов можно повысить с увеличением выборки.

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# Приложение А (входные данные)

1. APA (6th ed.) Dostoyevsky, F., Garnett, C., & In Neilson, W. A. (1917). Crime and punishment. New York: P.F. Collier & Son.

On an exceptionally hot evening early in July a young man came out of the garret in which he lodged in S. Place and walked slowly, as though in hesitation, towards K. bridge.  
  
He had successfully avoided meeting his landlady on the staircase. His garret was under the roof of a high, five-storied house and was more like a cupboard than a room. The landlady who provided him with garret, dinners, and attendance, lived on the floor below, and every time he went out he was obliged to pass her kitchen, the door of which invariably stood open. And each time he passed, the young man had a sick, frightened feeling, which made him scowl and feel ashamed. He was hopelessly in debt to his landlady, and was afraid of meeting her.  
  
This was not because he was cowardly and abject, quite the contrary; but for some time past he had been in an overstrained irritable condition, verging on hypochondria. He had become so completely absorbed in himself, and isolated from his fellows that he dreaded meeting, not only his landlady, but anyone at all. He was crushed by poverty, but the anxieties of his position had of late ceased to weigh upon him. He had given up attending to matters of practical importance; he had lost all desire to do so. Nothing that any landlady could do had a real terror for him. But to be stopped on the stairs, to be forced to listen to her trivial, irrelevant gossip, to pestering demands for payment, threats and complaints, and to rack his brains for excuses, to prevaricate, to lie—no, rather than that, he would creep down the stairs like a cat and slip out unseen.  
  
This evening, however, on coming out into the street, he became acutely aware of his fears.  
  
“I want to attempt a thing like that and am frightened by these trifles,” he thought, with an odd smile. “Hm... yes, all is in a man’s hands and he lets it all slip from cowardice, that’s an axiom. It would be interesting to know what it is men are most afraid of. Taking a new step, uttering a new word is what they fear most.... But I am talking too much. It’s because I chatter that I do nothing. Or perhaps it is that I chatter because I do nothing. I’ve learned to chatter this last month, lying for days together in my den thinking... of Jack the Giant-killer. Why am I going there now? Am I capable of that? Is that serious? It is not serious at all. It’s simply a fantasy to amuse myself; a plaything! Yes, maybe it is a plaything.”  
  
The heat in the street was terrible: and the airlessness, the bustle and the plaster, scaffolding, bricks, and dust all about him, and that special Petersburg stench, so familiar to all who are unable to get out of town in summer—all worked painfully upon the young man’s already overwrought nerves. The insufferable stench from the pot-houses, which are particularly numerous in that part of the town, and the drunken men whom he met continually, although it was a working day, completed the revolting misery of the picture. An expression of the profoundest disgust gleamed for a moment in the young man’s refined face. He was, by the way, exceptionally handsome, above the average in height, slim, well-built, with beautiful dark eyes and dark brown hair. Soon he sank into deep thought, or more accurately speaking into a complete blankness of mind; he walked along not observing what was about him and not caring to observe it. From time to time, he would mutter something, from the habit of talking to himself, to which he had just confessed. At these moments he would become conscious that his ideas were sometimes in a tangle and that he was very weak; for two days he had scarcely tasted food.  
  
He was so badly dressed that even a man accustomed to shabbiness would have been ashamed to be seen in the street in such rags. In that quarter of the town, however, scarcely any shortcoming in dress would have created surprise. Owing to the proximity of the Hay Market, the number of establishments of bad character, the preponderance of the trading and working class population crowded in these streets and alleys in the heart of Petersburg, types so various were to be seen in the streets that no figure, however queer, would have caused surprise. But there was such accumulated bitterness and contempt in the young man’s heart, that, in spite of all the fastidiousness of youth, he minded his rags least of all in the street. It was a different matter when he met with acquaintances or with former fellow students, whom, indeed, he disliked meeting at any time. And yet when a drunken man who, for some unknown reason, was being taken somewhere in a huge waggon dragged by a heavy dray horse, suddenly shouted at him as he drove past: “Hey there, German hatter” bawling at the top of his voice and pointing at him—the young man stopped suddenly and clutched tremulously at his hat. It was a tall round hat from Zimmerman’s, but completely worn out, rusty with age, all torn and bespattered, brimless and bent on one side in a most unseemly fashion. Not shame, however, but quite another feeling akin to terror had overtaken him.  
  
“I knew it,” he muttered in confusion, “I thought so! That’s the worst of all! Why, a stupid thing like this, the most trivial detail might spoil the whole plan. Yes, my hat is too noticeable.... It looks absurd and that makes it noticeable.... With my rags I ought to wear a cap, any sort of old pancake, but not this grotesque thing. Nobody wears such a hat, it would be noticed a mile off, it would be remembered.... What matters is that people would remember it, and that would give them a clue. For this business one should be as little conspicuous as possible.... Trifles, trifles are what matter! Why, it’s just such trifles that always ruin everything....”  
  
He had not far to go; he knew indeed how many steps it was from the gate of his lodging house: exactly seven hundred and thirty. He had counted them once when he had been lost in dreams. At the time he had put no faith in those dreams and was only tantalising himself by their hideous but daring recklessness. Now, a month later, he had begun to look upon them differently, and, in spite of the monologues in which he jeered at his own impotence and indecision, he had involuntarily come to regard this “hideous” dream as an exploit to be attempted, although he still did not realise this himself. He was positively going now for a “rehearsal” of his project, and at every step his excitement grew more and more violent.  
  
With a sinking heart and a nervous tremor, he went up to a huge house which on one side looked on to the canal, and on the other into the street. This house was let out in tiny tenements and was inhabited by working people of all kinds—tailors, locksmiths, cooks, Germans of sorts, girls picking up a living as best they could, petty clerks, etc. There was a continual coming and going through the two gates and in the two courtyards of the house. Three or four door-keepers were employed on the building. The young man was very glad to meet none of them, and at once slipped unnoticed through the door on the right, and up the staircase. It was a back staircase, dark and narrow, but he was familiar with it already, and knew his way, and he liked all these surroundings: in such darkness even the most inquisitive eyes were not to be dreaded.  
  
“If I am so scared now, what would it be if it somehow came to pass that I were really going to do it?” he could not help asking himself as he reached the fourth storey. There his progress was barred by some porters who were engaged in moving furniture out of a flat. He knew that the flat had been occupied by a German clerk in the civil service, and his family. This German was moving out then, and so the fourth floor on this staircase would be untenanted except by the old woman. “That’s a good thing anyway,” he thought to himself, as he rang the bell of the old woman’s flat. The bell gave a faint tinkle as though it were made of tin and not of copper. The little flats in such houses always have bells that ring like that. He had forgotten the note of that bell, and now its peculiar tinkle seemed to remind him of something and to bring it clearly before him.... He started, his nerves were terribly overstrained by now. In a little while, the door was opened a tiny crack: the old woman eyed her visitor with evident distrust through the crack, and nothing could be seen but her little eyes, glittering in the darkness. But, seeing a number of people on the landing, she grew bolder, and opened the door wide. The young man stepped into the dark entry, which was partitioned off from the tiny kitchen. The old woman stood facing him in silence and looking inquiringly at him. She was a diminutive, withered up old woman of sixty, with sharp malignant eyes and a sharp little nose. Her colourless, somewhat grizzled hair was thickly smeared with oil, and she wore no kerchief over it. Round her thin long neck, which looked like a hen’s leg, was knotted some sort of flannel rag, and, in spite of the heat, there hung flapping on her shoulders, a mangy fur cape, yellow with age. The old woman coughed and groaned at every instant. The young man must have looked at her with a rather peculiar expression, for a gleam of mistrust came into her eyes again.

1. Carroll, Lewis. Alice's Adventures in Wonderland. New York: Macmillan, 1920. Essay Citation: Podoll, Klaus.

Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, ‘and what is the use of a book,’ thought Alice ‘without pictures or conversations?’  
  
So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.  
  
There was nothing so very remarkable in that; nor did Alice think it so very much out of the way to hear the Rabbit say to itself, ‘Oh dear! Oh dear! I shall be late!’ (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.  
  
In another moment down went Alice after it, never once considering how in the world she was to get out again.  
  
The rabbit-hole went straight on like a tunnel for some way, and then dipped suddenly down, so suddenly that Alice had not a moment to think about stopping herself before she found herself falling down a very deep well.  
  
Either the well was very deep, or she fell very slowly, for she had plenty of time as she went down to look about her and to wonder what was going to happen next. First, she tried to look down and make out what she was coming to, but it was too dark to see anything; then she looked at the sides of the well, and noticed that they were filled with cupboards and book-shelves; here and there she saw maps and pictures hung upon pegs. She took down a jar from one of the shelves as she passed; it was labelled ‘ORANGE MARMALADE’, but to her great disappointment it was empty: she did not like to drop the jar for fear of killing somebody, so managed to put it into one of the cupboards as she fell past it.  
  
‘Well!’ thought Alice to herself, ‘after such a fall as this, I shall think nothing of tumbling down stairs! How brave they’ll all think me at home! Why, I wouldn’t say anything about it, even if I fell off the top of the house!’ (Which was very likely true.)  
  
Down, down, down. Would the fall never come to an end! ‘I wonder how many miles I’ve fallen by this time?’ she said aloud. ‘I must be getting somewhere near the centre of the earth. Let me see: that would be four thousand miles down, I think—’ (for, you see, Alice had learnt several things of this sort in her lessons in the schoolroom, and though this was not a very good opportunity for showing off her knowledge, as there was no one to listen to her, still it was good practice to say it over) ‘—yes, that’s about the right distance—but then I wonder what Latitude or Longitude I’ve got to?’ (Alice had no idea what Latitude was, or Longitude either, but thought they were nice grand words to say.)  
  
Presently she began again. ‘I wonder if I shall fall right through the earth! How funny it’ll seem to come out among the people that walk with their heads downward! The Antipathies, I think—’ (she was rather glad there was no one listening, this time, as it didn’t sound at all the right word) ‘—but I shall have to ask them what the name of the country is, you know. Please, Ma’am, is this New Zealand or Australia?’ (and she tried to curtsey as she spoke—fancy curtseying as you’re falling through the air! Do you think you could manage it?) ‘And what an ignorant little girl she’ll think me for asking! No, it’ll never do to ask: perhaps I shall see it written up somewhere.’  
  
Down, down, down. There was nothing else to do, so Alice soon began talking again. ‘Dinah’ll miss me very much to-night, I should think!’ (Dinah was the cat.) ‘I hope they’ll remember her saucer of milk at tea-time. Dinah my dear! I wish you were down here with me! There are no mice in the air, I’m afraid, but you might catch a bat, and that’s very like a mouse, you know. But do cats eat bats, I wonder?’ And here Alice began to get rather sleepy, and went on saying to herself, in a dreamy sort of way, ‘Do cats eat bats? Do cats eat bats?’ and sometimes, ‘Do bats eat cats?’ for, you see, as she couldn’t answer either question, it didn’t much matter which way she put it. She felt that she was dozing off, and had just begun to dream that she was walking hand in hand with Dinah, and saying to her very earnestly, ‘Now, Dinah, tell me the truth: did you ever eat a bat?’ when suddenly, thump! thump! down she came upon a heap of sticks and dry leaves, and the fall was over.  
  
Alice was not a bit hurt, and she jumped up on to her feet in a moment: she looked up, but it was all dark overhead; before her was another long passage, and the White Rabbit was still in sight, hurrying down it. There was not a moment to be lost: away went Alice like the wind, and was just in time to hear it say, as it turned a corner, ‘Oh my ears and whiskers, how late it’s getting!’ She was close behind it when she turned the corner, but the Rabbit was no longer to be seen: she found herself in a long, low hall, which was lit up by a row of lamps hanging from the roof.  
  
There were doors all round the hall, but they were all locked; and when Alice had been all the way down one side and up the other, trying every door, she walked sadly down the middle, wondering how she was ever to get out again.  
  
Suddenly she came upon a little three-legged table, all made of solid glass; there was nothing on it except a tiny golden key, and Alice’s first thought was that it might belong to one of the doors of the hall; but, alas! either the locks were too large, or the key was too small, but at any rate it would not open any of them. However, on the second time round, she came upon a low curtain she had not noticed before, and behind it was a little door about fifteen inches high: she tried the little golden key in the lock, and to her great delight it fitted!  
  
Alice opened the door and found that it led into a small passage, not much larger than a rat-hole: she knelt down and looked along the passage into the loveliest garden you ever saw. How she longed to get out of that dark hall, and wander about among those beds of bright flowers and those cool fountains, but she could not even get her head through the doorway; ‘and even if my head would go through,’ thought poor Alice, ‘it would be of very little use without my shoulders. Oh, how I wish I could shut up like a telescope! I think I could, if I only knew how to begin.’ For, you see, so many out-of-the-way things had happened lately, that Alice had begun to think that very few things indeed were really impossible.  
  
There seemed to be no use in waiting by the little door, so she went back to the table, half hoping she might find another key on it, or at any rate a book of rules for shutting people up like telescopes: this time she found a little bottle on it, (‘which certainly was not here before,’ said Alice,) and round the neck of the bottle was a paper label, with the words ‘DRINK ME’ beautifully printed on it in large letters.  
  
It was all very well to say ‘Drink me,’ but the wise little Alice was not going to do that in a hurry. ‘No, I’ll look first,’ she said, ‘and see whether it’s marked “poison” or not’; for she had read several nice little histories about children who had got burnt, and eaten up by wild beasts and other unpleasant things, all because they would not remember the simple rules their friends had taught them: such as, that a red-hot poker will burn you if you hold it too long; and that if you cut your finger very deeply with a knife, it usually bleeds; and she had never forgotten that, if you drink much from a bottle marked ‘poison,’ it is almost certain to disagree with you, sooner or later.  
  
However, this bottle was not marked ‘poison,’ so Alice ventured to taste it, and finding it very nice, (it had, in fact, a sort of mixed flavour of cherry-tart, custard, pine-apple, roast turkey, toffee, and hot buttered toast,) she very soon finished it off.  
  
‘What a curious feeling!’ said Alice; ‘I must be shutting up like a telescope.’  
  
And so it was indeed: she was now only ten inches high, and her face brightened up at the thought that she was now the right size for going through the little door into that lovely garden. First, however, she waited for a few minutes to see if she was going to shrink any further: she felt a little nervous about this; ‘for it might end, you know,’ said Alice to herself, ‘in my going out altogether, like a candle. I wonder what I should be like then?’ And she tried to fancy what the flame of a candle is like after the candle is blown out, for she could not remember ever having seen such a thing.  
  
After a while, finding that nothing more happened, she decided on going into the garden at once; but, alas for poor Alice! when she got to the door, she found she had forgotten the little golden key, and when she went back to the table for it, she found she could not possibly reach it: she could see it quite plainly through the glass, and she tried her best to climb up one of the legs of the table, but it was too slippery; and when she had tired herself out with trying, the poor little thing sat down and cried.  
  
‘Come, there’s no use in crying like that!’ said Alice to herself, rather sharply; ‘I advise you to leave off this minute!’ She generally gave herself very good advice, (though she very seldom followed it), and sometimes she scolded herself so severely as to bring tears into her eyes; and once she remembered trying to box her own ears for having cheated herself in a game of croquet she was playing against herself, for this curious child was very fond of pretending to be two people. ‘But it’s no use now,’ thought poor Alice, ‘to pretend to be two people! Why, there’s hardly enough of me left to make one respectable person!’  
  
Soon her eye fell on a little glass box that was lying under the table: she opened it, and found in it a very small cake, on which the words ‘EAT ME’ were beautifully marked in currants. ‘Well, I’ll eat it,’ said Alice, ‘and if it makes me grow larger, I can reach the key; and if it makes me grow smaller, I can creep under the door; so either way I’ll get into the garden, and I don’t care which happens!’  
  
She ate a little bit, and said anxiously to herself, ‘Which way? Which way?’, holding her hand on the top of her head to feel which way it was growing, and she was quite surprised to find that she remained the same size: to be sure, this generally happens when one eats cake, but Alice had got so much into the way of expecting nothing but out-of-the-way things to happen, that it seemed quite dull and stupid for life to go on in the common way.  
  
So she set to work, and very soon finished off the cake.

1. Paul Rincon. Nasa Moon rocket core leaves for testing [Электронный ресурс] // BBC NEWS. URL: <https://www.bbc.com/news/science-environment-51048986>

The first core stage for Nasa's "mega-rocket", the SLS, has left its factory in New Orleans for crucial tests to assess its readiness for launch.  
  
The Space Launch System (SLS) is a critical part of the space agency's Artemis programme, which aims to return Americans to the Moon by 2024.  
  
The core stage is the centrepiece of the new rocket and will undergo comprehensive testing in Mississippi.  
  
On Wednesday, it was placed on a barge which will sail it to its destination.  
  
Nasa deputy administrator Jim Morhard attended the roll-out of the rocket stage from the Michoud Assembly Facility (Maf) in New Orleans where it was built.  
  
He said it represented "an exciting leap forward in the Artemis program as Nasa teams make progress toward the launch pad".  
  
The rocket programme, which was announced in 2010, has been hit by delays and cost overruns.  
  
Some in the space community believe it would be better to launch deep space missions on commercial rockets. But supporters of the programme say that Nasa needs its own heavy-lift launch capability.  
  
After roll-out from the Maf, the core was loaded on to Nasa's Pegasus barge to travel by water to the Stennis Space Center near Bay St Louis in Mississippi.  
  
The test campaign at Stennis is called the "Green Run", and will involve operating all the core stage systems simultaneously for the first time.  
  
This will see the four powerful RS-25 engines fired for about eight minutes (or perhaps a little less), and throttled at different settings. This will mimic the levels of thrust needed during launch.  
  
The SLS core stage contains two propellant tanks - one to hold liquid oxygen and another for liquid hydrogen. Together, they hold a combined 733,000 gallons (2.7 million litres) of propellant to power the engines.  
  
The SLS was designed to re-use technology originally developed for the space shuttle programme, which ran from 1981-2011.  
  
The RS-25 thrusters are the same ones that powered the orbiter, and the SLS core stage is based on the external tank that fed the shuttle engines with propellant (albeit with significant modifications).  
  
Two solid rocket boosters (SRBs) - similar to those that helped launch the shuttle - will sit either side of the SLS core.  
  
The rocket will provide the power required to send the Orion spacecraft - Nasa's next-generation crew vehicle - on its way to the Moon. The rocket's maiden launch (Artemis-1) is expected to occur some time in 2021.  
  
Last year, John Shannon, who has been Boeing's head of the SLS programme since 2015, told me: "I suspect that once SLS is in the national capability, there won't be a need for another heavy-lift vehicle like it for many years. So this is really a once-in-a-generation opportunity."  
  
The core is the largest stage Nasa has ever had built at the Louisiana factory, including the Saturn V rocket stages for the Apollo programme.  
  
"This is a historic moment for Nasa's Artemis programme and a proud time for the... team as the first flight article leaves the factory floor," said Julie Bassler, the Nasa SLS Stages manager.  
  
Meanwhile, Nasa and its partners have completed production of the Orion spacecraft for the first Artemis mission. It is currently undergoing final testing at the Plum Brook Station in Ohio.  
  
For the Artemis-1 mission, Orion will be sent on a loop around the Moon to test the hardware in deep space. The spacecraft will carry no crew.  
  
The first mission to carry crew will be Artemis-2, which should send four astronauts on a lunar flyby.  
  
Artemis-3, which is being targeted for 2024, will see a man and a woman land at the lunar south pole - the first time astronauts will have travelled to the lunar surface since 1972.

1. June Simms. Time is One of the Great Mysteries [Электронный ресурс] // VOA Learning English. Science & Technology. URL: <https://learningenglish.voanews.com/a/time-clock-calendar/1819679.html>

From VOA Learning English, this is Science in the News. I'm June Simms.  
  
Our program today is about a mystery as old as time. Bob Doughty and Sarah Long tell about the mystery of time.  
  
If you can read a clock, you can know the time of day. But no one knows what time itself is. We cannot see it. We cannot touch it. We cannot hear it. We know it only by the way we mark its passing.  
  
For all our success in measuring the smallest parts of time, time remains one of the great mysteries of the universe.  
  
One way to think about time is to imagine a world without time. There could be no movement, because time and movement cannot be separated.  
  
A world without time could exist only as long as there were no changes. For time and change are linked. We know that time has passed when something changes.  
  
In the real world - the world with time - changes never stop. Some changes happen only once in a while, like an eclipse of the moon. Others happen repeatedly, like the rising and setting of the sun. Humans always have noted natural events that repeat themselves. When people began to count such events, they began to measure time.  
  
In early human history, the only changes that seemed to repeat themselves evenly were the movements of objects in the sky. The most easily seen result of these movements was the difference between light and darkness.  
  
The sun rises in the eastern sky, producing light. It moves across the sky and sinks in the west, causing darkness. The appearance and disappearance of the sun was even and unfailing. The periods of light and darkness it created were the first accepted periods of time. We have named each period of light and darkness - one day.  
  
People saw the sun rise higher in the sky during the summer than in winter. They counted the days that passed from the sun's highest position until it returned to that position. They counted 365 days. We now know that is the time Earth takes to move once around the sun. We call this period of time a year.  
  
Early humans also noted changes in the moon. As it moved across the night sky, they must have wondered. Why did it look different every night? Why did it disappear? Where did it go?  
  
Even before they learned the answers to these questions, they developed a way to use the changing faces of the moon to tell time.  
  
The moon was "full" when its face was bright and round. The early humans counted the number of times the sun appeared between full moons. They learned that this number always remained the same - about 29 suns. Twenty-nine suns equaled one moon. We now know this period of time as one month.  
  
Early humans hunted animals and gathered wild plants. They moved in groups or tribes from place to place in search of food. Then, people learned to plant seeds and grow crops. They learned to use animals to help them work, and for food.  
  
They found they no longer needed to move from one place to another to survive.  
  
As hunters, people did not need a way to measure time. As farmers, however, they had to plant crops in time to harvest them before winter. They had to know when the seasons would change. So, they developed calendars.  
  
No one knows when the first calendar was developed. But it seems possible that it was based on moons, or lunar months.  
  
When people started farming, the wise men of the tribes became very important. They studied the sky. They gathered enough information so they could know when the seasons would change. They announced when it was time to plant crops.  
  
The divisions of time we use today were developed in ancient Babylonia 4,000 years ago. Babylonian astronomers believed the sun moved around the Earth every 365 days. They divided the trip into 12 equal parts, or months. Each month was 30 days. Then, they divided each day into 24 equal parts, or hours. They divided each hour into 60 minutes, and each minute into 60 seconds.  
  
Humans have used many devices to measure time. The sundial was one of the earliest and simplest.  
  
A sundial measures the movement of the sun across the sky each day. It has a stick or other object that rises above a flat surface. The stick, blocking sunlight, creates a shadow. As the sun moves, so does the shadow of the stick across the flat surface. Marks on the surface show the passing of hours, and perhaps, minutes.  
  
The sundial works well only when the sun is shining. So, other ways were invented to measure the passing of time.  
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One device is the hourglass. It uses a thin stream of falling sand to measure time. The hourglass is shaped like the number eight - wide at the top and bottom, but very thin in the middle. In a true "hour" glass, it takes exactly one hour for all the sand to drop from the top to the bottom through a very small opening in the middle. When the hourglass is turned with the upside down, it begins to mark the passing of another hour.  
  
By the eighteenth century, people had developed mechanical clocks and watches. And today, many of our clocks and watches are electronic.  
  
So, we have devices to mark the passing of time. But what time is it now? Clocks in different parts of the world do not show the same time at the same time. This is because time on Earth is set by the sun's position in the sky above.  
  
We all have a 12 o'clock noon each day. Noon is the time the sun is highest in the sky. But when it is 12 o'clock noon where I am, it may be 10 o'clock at night where you are.  
  
As international communications and travel increased, it became clear that it would be necessary to establish a common time for all parts of the world.  
  
In 1884, an international conference divided the world into 24 time areas, or zones. Each zone represents one hour. The astronomical observatory in Greenwich, England, was chosen as the starting point for the time zones. Twelve zones are west of Greenwich. Twelve are east.  
  
The time at Greenwich - as measured by the sun - is called Universal Time. For many years it was called Greenwich Mean Time.  
  
Some scientists say time is governed by the movement of matter in our universe. They say time flows forward because the universe is expanding. Some say it will stop expanding some day and will begin to move in the opposite direction, to grow smaller. Some believe time will also begin to flow in the opposite direction - from the future to the past. Can time move backward?  
  
Most people have no trouble agreeing that time moves forward. We see people born and then grow old. We remember the past, but we do not know the future. We know a film is moving forward if it shows a glass falling off a table and breaking into many pieces. If the film were moving backward, the pieces would re-join to form a glass and jump back up onto the table. No one has ever seen this happen. Except in a film!  
  
Some scientists believe there is one reason why time only moves forward. It is a well-known scientific law - the second law of thermodynamics. That law says disorder increases with time. In fact, there are more conditions of disorder than of order.  
  
For example, there are many ways a glass can break into pieces. That is disorder. But there is only one way the broken pieces can be organized to make a glass. That is order. If time moved backward, the broken pieces could come together in a great many ways. Only one of these many ways, however, would re-form the glass. It is almost impossible to believe this would happen.  
  
Not all scientists believe time is governed by the second law of thermodynamics. They do not agree that time must always move forward. The debate will continue about the nature of time. And time will remain a mystery.  
  
Our program was written by Marilyn Christiano and read by Sarah Long and Bob Doughty. I'm June Simms. Join us again next week for more news about science on the Voice of America.

# Приложение B (выходные данные в формате csv)

Наименование текста,Автор,Тип текста,Индекс Флеша,Процент уникальных слов,Средняя частота повторения слова,Процент существительных,Процент глаголов,Процент прилагательных,Средняя длина абзаца в предложениях,Средняя длина абзаца в словах,Средняя длина абзаца в буквах,Средняя длина предложения в словах,Средняя длина предложения в буквах,Средняя длина слова,Ссылка на интернет-ресурс  
Crime and Punishment,F. Dostoevskiy,Literature,59.91,0.38,2.65,0.71,0.09,0.07,6.91,178.82,661.00,25.88,95.67,4.22,http://dostoevskiy-lit.ru/dostoevskiy/foreign/crime-and-punishment/1-chapter-one.htm  
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Time Is One of the Great Mysteries,J. Simms,Learning English podcast,70.55,0.32,3.13,0.72,0.10,0.08,3.53,44.67,168.61,12.66,47.80,4.27,https://learningenglish.voanews.com/a/time-clock-calendar/1819679.html