MDS*Writer*: Annotation tool for creating high-quality multi-document summarization corpora

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ACL 2016 Demo Paper Submission 23
– Screenshots –

Source code:
https://github.com/UKPLab/mdswriter

Video tutorial:
https://www.youtube.com/channel/UC1-qTfTCnVBZklJwCj2kGDQ

Dashboard

ID	Topic	Documents	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
1	Albert Einstein	10	✓	✓	✓	✓	✓	✓	○
2	AlphaGo vs. Lee Sedol	11	✓	✓	✓	✓	✓	✓	✓
3	Zika Virus	9	✓	✓	✓	✓	✓	✓	○
4	Brexit	25	✓	✓	✓	✓	○	✗	✗
5	46th World Economic Forum	15	✓	✓	✓	○	✗	✗	✗
6	US presidential election 2016	13	✓	✓	✓	✓	✓	○	✗
7	Refugee Crisis	20	✓	✓	○	✗	✗	✗	✗
8	Rio Olympics	15	✓	✓	○	✗	✗	✗	✗
9	Myanmar general elections	15	○	✗	✗	✗	✗	✗	✗
10	Helmut Schmidt	11	○	✗	✗	✗	✗	✗	✗

Dashboard: Topic and progress overview

1. Nugget identification

Step Complete

Wikipedia: Albert Einstein

Wikipedia: Albert Einstein

Albert Einstein was a German-born theoretical physicist. He developed the general theory of relativity, one of the two pillars of modern physics (alongside quantum mechanics). Einstein's work is also known for its influence on the philosophy of science. Einstein is best known in popular culture for his mass-energy equivalence formula E = mc2 (which has been dubbed "the world's most famous equation"). He received the 1921 Nobel Prize in Physics for his "services to theoretical physics", in particular his discovery of the law of the photoelectric effect, a pivotal step in the evolution of quantum theory.

Near the beginning of his career, Einstein thought that Newtonian mechanics was no longer enough to reconcile the laws of classical mechanics with the laws of the electromagnetic field. This led to the development of his special theory of relativity. He realized, however, that the

Quotes about Einstein

--- No document selected ---
Wikipedia: Albert Einstein
Nobelprice.org: Questions and Answers
General relativity
Einstein family
Biography.com: Albert Einstein
Einstein for kids: Biography
Quotes about Einstein
Mass-energy equivalence
Annus Mirabilis papers
History of physics

Guardian (13 May 2008)

Some people have reported that Einstein was quite a good musician, but others weren't so enthusiastic. A professional violinist claimed he "fiddled like a lumberjack"; a famous pianist playing with him demanded, "For heaven's sake Albert, can't you count?"; and a music critic in Berlin, thinking Einstein was famous for his violin playing rather than physics, judged that "Einstein's playing is excellent, but he does not deserve world fame; there are many others just as good."
* Alice Calaprice and Trevor Lipscombe, Albert Einstein: A Biography (2005)

[?] Einstein is best known [3]

[?] for his mass-energy equivalence formula [3]

[?] He received the 1921 Nobel Prize in Physics for [2]

[?] his discovery of the law of the photoelectric effect [2]

[Alice Calaprice and Trevor Lipscombe] Some people have reported that Einstein was quite a good musician

[?] He developed the general theory of relativity

Step 1: Select important information

MDS*Writer*: Albert Einstein

Dashboard | User: Demo (Logout)

2. Redundancy removal

Step Complete

New group (use drag&drop)

☰ Group 3 ✕

☰ Albert Einstein was born as the first child of the Jewish couple Hermann and Pauline Einstein, nee Koch, in Ulm on March 14, 1879 ▼

☰ Albert Einstein was born on 14 March 1879 ▼

☰ Group 4 ✕

☰ In 1921, he won the Nobel Prize for physics for his explanation of the photoelectric effect ▼

☰ He received the 1921 Nobel Prize in Physics for [...] his discovery of the law of the photoelectric effect ▲

from **Wikipedia: Albert Einstein**:

(which has been dubbed "the world's most famous equation"). **He received the 1921 Nobel Prize in Physics for** his "services to theoretical physics", in particular **his discovery of the law of the photoelectric effect**, a pivotal step in the evolution of quantum theory. Near

☰ Albert Einstein was awarded the 1921 Nobel Prize in Physics in 1922 ▼

☰ The Nobel Prize was announced on 9 November 1922 ▼

☰ Group 5 ✕

☰ Being too remote from Sweden, Albert Einstein could not attend the Nobel Prize Award Ceremony in Stockholm ▼

Step 2: Group redundant information

MDS*Writer*: Albert Einstein

Dashboard | User: **Demo** (Logout)

3. Best nugget selection

Step Complete

Group 3

Albert Einstein was born as the first child of the Jewish couple Hermann and Pauline Einstein, nee Koch, in Ulm on March 14, 1879

Albert Einstein was born on 14 March 1879

Group 4

In 1921, he won the Nobel Prize for physics for his explanation of the photoelectric effect

He received the 1921 Nobel Prize in Physics for [...] his discovery of the law of the photoelectric effect

from **Wikipedia: Albert Einstein:**

(which has been dubbed "the world's most famous equation"). **He received the 1921 Nobel Prize in Physics for** his "services to theoretical physics", in particular **his discovery of the law of the photoelectric effect**, a pivotal step in the evolution of quantum theory. Near

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Group 5

Being too remote from Sweden, Albert Einstein could not attend the Nobel Prize Award Ceremony in Stockholm

Step 3: Choose representative information

4. Co-reference resolution

Step Complete

Original nugget

1905 he published several of his important scientific works.
One of them deals with the ground-breaking special theory of relativity. Another work contains the most famous formula of the

Modified nugget

One of them [scientific works] deals with the ground-breaking special theory of relativity

Previous nugget | Nugget 4 of 9 | Next nugget

A short time later the Einstein family went to Munich where Albert first attended elementary school and subsequently Luitpold grammar school. He was an "average" pupil but already very early interested in science and mathematics. He did not like lessons in grammar school as they were held with strict discipline and as he was forced to learn. When he turned 15 he left school without any degree and followed his family to Milan. To make up for the missed degree he attended school in Aarau (Switzerland) from 1895 to 1896 when he successfully took his A-levels and began to study in Zurich. His ambition was to obtain the diploma of a subject teacher for mathematics and physics. He successfully finished his studies in July 1900.

He moved to Bern and was given work at the Patent Office. In his leisure time he worked in the area of theoretical physics. In 1905 he published several of his important scientific works. **One of them deals with the ground-breaking special theory of relativity**. Another work contains the most famous formula of the world "E = m · c2". This formula states that matter can be converted into energy.

In this mathematical equation, E stands for energy, m for mass and c for the speed of the light in a vacuum (ca. 300,000 km/s).

Step 4: Resolve co-references

5. Sentence formulation

Step Complete

Original nugget

(which has been dubbed "the world's most famous equation").
He received the 1921 Nobel Prize in Physics for his "services to theoretical physics", in particular
his discovery of the law of the photoelectric effect, a pivotal step in the evolution of quantum theory. Near

Modified nugget

Albert Einstein received the 1921 Nobel Prize in Physics for his discovery of the law of the photoelectric effect.

Previous nugget | Nugget 6 of 9 | Next nugget

Wikipedia: Albert Einstein

Albert Einstein was a German-born theoretical physicist. He developed the general theory of relativity, one of the two pillars of modern physics (alongside quantum mechanics). Einstein's work is also known for its influence on the philosophy of science. Einstein is best known in popular culture for his mass-energy equivalence formula E = mc2 (which has been dubbed "the world's most famous equation"). He received the 1921 Nobel Prize in Physics for his "services to theoretical physics", in particular his discovery of the law of the photoelectric effect, a pivotal step in the evolution of quantum theory.

Near the beginning of his career, Einstein thought that Newtonian mechanics was no longer enough to reconcile the laws of classical mechanics with the laws of the electromagnetic field. This led to the development of his special theory of relativity. He realized, however, that the principle of relativity could also be extended to gravitational fields, and with his subsequent theory of gravitation in 1916, he published a paper on general relativity. He continued to deal with problems of statistical mechanics and quantum theory, which led to his explanations of particle theory and the motion of molecules. He also investigated the thermal properties of light which laid the foundation of the photon theory of light. In 1917, Einstein applied the

Step 5: Rewrite nuggets as full sentences

6. Summary organization

Step Complete

New group (use drag&drop)

Introduction

☰ Albert Einstein was born on 14 March 1879. ▼

☰ Albert Einstein was a theoretical physicist. ▼

☰ **Achievements** ✎ ✕

☰ Albert Einstein developed the general theory of relativity. ▼

☰ One of the scientific works deals with the ground-breaking special theory of relativity. ▼

☰ Einstein is best known for his mass-energy equivalence formula. ▼

☰ **Nobel Prize** ✎ ✕

☰ Albert Einstein received the 1921 Nobel Prize in Physics for his discovery of the law of the photoelectric effect. ▲

from **Wikipedia: Albert Einstein:**

(which has been dubbed "the world's most famous equation"). **He received the 1921 Nobel Prize in Physics for** his "services to theoretical physics", in particular **his discovery of the law of the photoelectric effect**, a pivotal step in the evolution of quantum theory. Near

☰ Being too remote from Sweden, Albert Einstein could not attend the Nobel Prize Award Ceremony in Stockholm. ▼

Step 6: Order the sentences thematically

7. Summary composition

Step Complete

Albert Einstein

Albert Einstein was born on 14 March 1879. He was a theoretical physicist.

Albert Einstein developed the general theory of relativity. One of his important scientific works deals with the ground-breaking special theory of relativity. He is best known for his mass-energy equivalence formula.

For his discovery of the law of the photoelectric effect, he received the 1921 Nobel Prize in Physics. Being too remote from Sweden, Albert Einstein could not attend the Nobel Prize Award Ceremony in Stockholm.

Alice Calaprice and Trevor Lipscombe note that some people have reported that Einstein was quite a good musician. Later, he immigrated to the U.S. [...]

ca. 106/300 Words

All Nuggets

All Nuggets

- Einstein is best known...for his mass-energy equivalence formula
- He developed the general theory of relativity
- Albert Einstein was born as the first child of the Jewish couple Hermann and Pauline Einstein, nee Koch, in Ulm on March 14, 1879
- Albert Einstein was born on 14 March 1879
- In 1921, he won the Nobel Prize for physics for his explanation of the photoelectric effect
- He received the 1921 Nobel Prize in Physics for...his discovery of the law of the photoelectric effect
- Albert Einstein was awarded the 1921 Nobel Prize in Physics in 1922
- The Nobel Prize was announced on 9 November 1922
- Being too remote from Sweden, Albert Einstein could not attend the Nobel Prize Award Ceremony in Stockholm
- One of them deals with the ground-breaking special theory of relativity
- Some people have reported that Einstein was quite a good musician
- Albert Einstein was a...theoretical physicist
- immigrated to the U.S.

Step 7: Write the final summary