

# Dynamic Wikipedia

## *Exploring Real-Time Change*

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### **Introduction**

Wikipedia is a mainstay in our information age society. Founded in 2001 as a free online encyclopedia, Wikipedia revolves around the core tenant that no one group should control what information is available to the public. To that end, Wikipedia, unlike its counterpart Encyclopædia Britannica, allows anyone to make edits or add new entries to its database. This has no doubt contributed to Wikipedia's success. In 2018, it was the fifth most visited website according to Alexa Internet. Currently, Wikipedia has approximately 5.8 million entries in English alone, and over 48 million entries across all languages. This popularity has given Wikipedia the credibility to be referenced as a knowledge source for virtual assistants and search engines. Google's "Knowledge Graph" (a collection of information about a search topic) routinely used entries from Wikipedia as a source for their information.

Wikipedia isn't perfect, however. In fact, its basic premise of allow contributions from anyone makes it difficult to assure the credibility of all the information in Wikipedia. Uninformed users could accidentally add incorrect information, "trollish" users could alter information as a prank, and malevolent actors could try and promote or suppress certain information in order to further an agenda and spread misinformation. This is even a problem within the Wikimedia Foundation (WMF), the organization

overseeing the governance of Wikipedia. There are cases where WMF members have used their sway to determine what information does and does not make it onto Wikipedia.

To counter these incidents, Wikipedia does include some safety measures. Some regular contributors have the ability to become moderators for certain topics within Wikipedia, granting them special privileges designed to reduce the interference of politics and bad actors. They can set entries to allow edits by only verified users, and have the final say on which edits remain. While these powers are designed to prevent malevolent or ignorant tampering, it is important to keep in mind the potential for these powers to be used counter to the public good.

Adding to the complexities of maintaining the world's largest free and open encyclopedia, the use of automated bots as a means of updating articles is becoming more prevalent. The use case for such automation is clear: they can handle the entry and update of simple but tedious information that a real human might forget or not want to do. Once these systems are set up, people can focus their time on managing more complex topics that bots are not yet capable of.

Taken in its entirety, Wikipedia is a complex, rapidly evolving source of information informing our knowledge of the world, knowingly or not. Despite this outsized importance, casually browsing Wikipedia for information does not leave an

impression of a continually changing, (often) minimally vetted database of information. While this system is not inherently better or worse than a more static and controlled encyclopedia, it is important to be conscious of the environment and context in which we consume information. To this end, the purpose of this project is to explore how Wikipedia changes over time. By educating users on the frequency, magnitude, and breath of change Wikipedia undergoes daily, I hope to present Wikipedia as a dynamic source of knowledge, rather than a static one.

## Related Work

This project is not the first to explore the dynamic nature of Wikipedia. In researching this topic, I came across a few other works that illustrate this concept for various purposes.

- Listen to Wikipedia
  - Encodes a lot of information (size of edit = circle size and pitch, addition/deletion = sound type)
  - Has a log of every edit in addition to visualization
  - No context or significance for data, very artistic
- Wikipulse
  - Provides numeric values for each wiki
  - Speedometer is more skeuomorphic than useful
  - No context
- History Flow
  - Static visualization
  - Good at telling story

- Context / info is separate from visualization
- Doesn't give user a sense of immediacy (presented as historic)

## Methods

## Results

## Discussion

## Future Work

## References

Listen to Wikipedia ([listen.hatnote.com](http://listen.hatnote.com))

Wikipulse ([wikipulse.herokuapp.com](http://wikipulse.herokuapp.com))

History Flow ([bewitched.com/historyflow](http://bewitched.com/historyflow))

Wikipedia controversies  
([en.wikipedia.org/wiki/List\\_of\\_Wikipedia\\_controversies](http://en.wikipedia.org/wiki/List_of_Wikipedia_controversies))

History of Wikipedia  
([en.wikipedia.org/wiki/History of Wikipedia](http://en.wikipedia.org/wiki/History_of_Wikipedia))