

Annotated Bibliography

Central Question

What is the Open Source movement? How does Open Source changed my life and the world?

Primary Sources

The MIT License

Summary

The MIT License is one of the most used open source license for software. It is one of the most permissive licenses that granted users to share, modify, and commercialize the software in the condition that the software creator(s) is/are not responsible for any damages resulted from the software.

Significance

The MIT License enabled millions of programmers to freely share their software with others and collaborate with other programmers without the restrictions of the strict Copyright laws.

Declaration of Independence

Summary

The Declaration formally established America as a free and independent state and cut of any allegiance to Britain. The most famous sentence addresses the fundamental principles upon which the United States was formed:

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.

Significance

Freedom and equality underlies all the principles of both the U.S. and the Open Source movement which originated in MIT. The Open Source movement thrives to make all human knowledge and creation freely accessible to all without or with low costs. Similar to how Americans grouped together and formed the United States for their own mutual benefits, thousands of open source communities surrounding different areas are formed to better develop, progress, and disseminate human knowledge, whether it is about the Harry Potter Series, Computer Science, or Art.

Android Popularity

Summary

Introduced by Google in 2007, Android is the most popular smartphone operating system in the world as of 2018. Since its release, sales of smartphones running on the Android have grown strongly over the years. In 2009, 6.8 million [Android smartphones were sold](#). By 2015, this figure had

risen to more than 1.16 billion. Android accounted for around 85 percent of all [smartphone sales to end users worldwide](#) in the beginning of 2016.

Significance

Open Source software are around us every day but people just do not notice them. The popularity of the Android mobile operating system proves that open source has become essential to our daily life.

Mobile Usage Per Day

Summary

Average mobile usage (which includes both smartphones and tablets) has increased from 0.3 hours per day in 2008 to 3.3 hours a day in 2017

Significance

If we spend about 30% of our waking hours on mobile devices that runs on predominately open source operating system, open source is really a large part of our life.

Apache HTTP Server

Summary

In 2009, it became the first web server software to serve more than 100 million [websites](#).^[10]As of August 2018, it was estimated to serve 39% of all active websites and 35% of the top million websites.

Significance

Besides the more visible parts of open source software, more invisible open source components powered our information age. One of the best example is the Apache HTTP Server which delivers millions of websites to end users. Without this and other open source HTTP Servers, the internet will shut down.

Google Chrome, Firefox, Samsung Internet, and Microsoft Edge

Summary

As of April 2019, browsers based on open source Chromium accounts for 73.58% of the global market share.

Significance

Besides the HTTP servers, web browsers are where most of us spend large chunk of our time on our laptop or phone. This is another way open source help power our life to make working more productive and entertainment more convenient.

Creative Commons Licenses

Summary

Every license helps creators retain copyright while allowing others to copy, distribute, and make some uses of their work. Every Creative Commons license also ensures licensors get the credit for their work they deserve. Every Creative Commons license works around the world and lasts as long as applicable copyright lasts.

Significance

Creative Commons Licenses enable creators and innovators around the world to freely share their knowledge and inventions with others while retaining their copyrights. Knowledge is not an apple, if you give your knowledge to another, the other person and you both *gain* knowledge because knowledge grows and develops when more people know it. The digital media has enabled unprecedented rate of information sharing but copyright has long throttled much of this beneficial communication of ideas. Creative Commons make sharing much more simple, understandable, and desirable and make connecting with knowledges and people both in the past and present as easy as possible.

Statistics of medias licensed under Creative Commons in Flickr

Summary

As of May 2019, there are a total of 199,447,952 photos licensed under Creative Commons Licenses.

Significance

Photo sharing platforms like Flickr represent how wide spread Creative Commons licensed artworks are. New sites similar to Flickr like Unsplash also share the spirit of Creative Commons even though they may not use the exact licenses.

Statistics of Creative Commons in the Arts in 2015

Summary

In 2015, over 50 cultural institutions have made their permanent collections or records available under CC licenses including MoMA, Europeana, Brooklyn Museum, New York Public Library. Technology institutions like NASA and SpaceX also released many of their photos of space to the public domain.

Significance

Most notably Europeana has a total of 37,243,395 works released under Creative Commons Licenses or in the public domain. Famous paintings like the School of Athens from thousands of European archives, libraries and museums are available in digital and accessible forms in the Europeana Collections.

Wikipedia Visualizations

Wikipedia is one of the best example of the Open Source movement and a demonstration of how global and boundless human collaboration can create the biggest and richest human knowledge directory ever existed. A lot of us have used Wikipedia for a wide variety of reasons but few of us know answers to such questions like:

1. How huge is Wikipedia?
2. What topics does Wikipedia cover?
3. Who contributes to Wikipedia?
4. How active is the Wikipedia community?

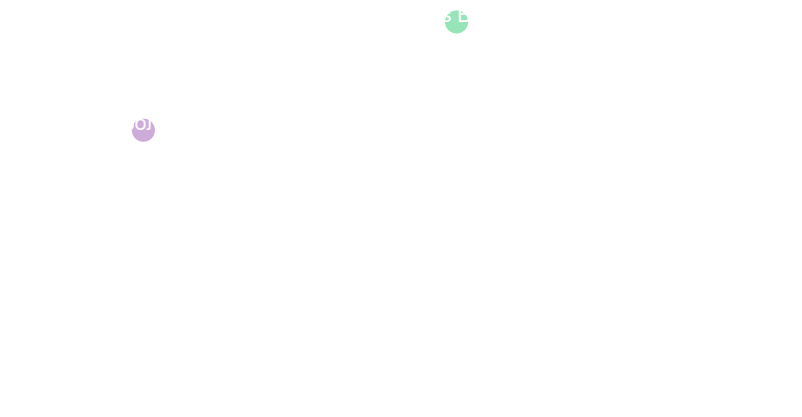
The following projects try to answer these questions and do much more to show the power of open source collaboration and the unbelievable strength of community when millions of humans come together to work on a project.

Listen to Wikipedia

Listen to the sound of Wikipedia's recent changes feed. Bells indicate additions and string plucks indicate subtractions. Pitch changes according to the size of the edit; the larger the edit, the deeper the note. Green circles show edits from [unregistered contributors](#), and purple circles mark edits performed by [automated bots](#). ([source](#))

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Listen to Wikipedia



Histography

World history is on a sliding scale in “Histography.” Across a resizable timeline, small black dots mark historical milestones. Click to select a moment, and explore the Wikipedia sources. Play with the categories to filter history to ‘music’, ‘inventions’, ‘riots’ and more. Time has rarely appeared so succinct. But within each dot there are thousands of further paths on the Wikipedia articles through history and culture. ([source](#))



WikiGalaxy

Float through 100,000 of 2014’s most popular Wikipedia articles in the “WikiGalaxy.” Here, related topics are grouped as 500 ‘nebulae’ with colorful points of light referencing articles in dark 3D space. Try ‘fly mode’ to experience the joy of encountering random articles in any and all directions. This is Star Trek for browsing the world’s greatest public library. ([source](#))



Personal Experience

Summary

I am an active participant in sharing my own knowledge and collaborating with other programmers. On Stack Overflow which is the biggest Q&A platform for programmers worldwide, I have so far answered 13 questions in details and reached an estimated impact of about eight thousand people. I also published all my programming projects on the largest open source platform GitHub under the MIT License so that other developers can make use of them as needed. My most popular package on other open source platform similar to GitHub called NPM received 935 total downloads so far in two months.

Significance

Even though my programming skills are still very limited, I'm willing to share what I know with the world so that other developers can benefit from my knowledge. The most heart-warming moment for all my contributions on Stack Overflow was when one user commented on one of my answers that

Looked at a bunch and this one is the simplest and cleanest – Michael Terry

At the moment when I saw this comment, I suddenly felt that all my efforts in experimenting and developing the code in the answer is well worth it and at least somebody is using them. There are other warm moments like the above that makes me and others feel the intimacy of the Open Source community and that our individual efforts matters.

The below conversation between the author of a math library and me on GitHub is a very good example of a typical open source collaboration I see often.

AlienKevin commented on Feb 17

Hi, I have looked for an equation solver written in Javascript for a long time but found none that has enough features and reliable at the same time. I would really appreciate it if nerdamer solver can support more functions. As of currently, I see that the results outputted are very close to the final answers so I wonder if improvements are easy enough to implement.

.....

The above are all my personal speculations and I believe that there are a lot more nuances and difficulties in implementing those functions that I may never thought about. So sorry if I underestimate the difficulty.

jiggzson commented on Feb 18

@AlienKevin, thank you for the detailed description of the issue. You're absolutely correct. It's not very hard at all. The next 3 major issues on my agenda are more than likely going to require a complete rewrite of the solve function and in order to do so I'll need a reasonable amount of tests to make sure I don't break anything which currently works. If you already have a broad range of currently passing test and want to share, I'd greatly appreciate that. If

not no worries. Having those tests ready to go would just help to speed things up.

AlienKevin commented on Feb 19

I don't have any but I'm happy to help generate some. I don't know how this works. Do you have any guidelines for generating test cases?

jiggzson commented on Feb 19

I'm not looking for any particular tests. I just know that the current tests don't cover quite a few cases so if you notice any then point it out. If not it's no biggie.

.....

AlienKevin commented on Feb 20

Thank you for your detailed reply..... I'm looking forward to the improvement :)

Secondary Sources

Good Faith Collaboration

Summary

This is a book analyzing Wikipedia's collaborative culture including three principle topics:

1. Good Faith Collaboration
2. Openess
3. Consensus

Significance

This book reveals a lot of overlaps between founding American values seen in the Declaration, the Constitution, and Supreme Court Cases and the principles of Open Source communities like Wikipedia.

[mindmap link](#)

References

"About The Licenses." *Creative Commons*, creativecommons.org/licenses.

"Browser Market Share Worldwide." *StatCounter Global Stats*, 2019, gs.statcounter.com/browser-market-share#monthly-200901-201707.

Cormec, Owen. "WikiGalaxy: Explore Wikipedia in 3D." *WikiGalaxy: Explore Wikipedia in 3D*, wiki.polyfra.me/.

"Explore Creative Commons." *Flickr*, Yahoo!, 2019, www.flickr.com/creativecommons/.

Goldstein, Ayala. "Top 10 Open Source Licenses in 2018: Trends and Predictions." *WhiteSource*, 21 Feb. 2019, resources.whitesourcesoftware.com/blog-whitesource/top-open-source-licenses-trends-and-predictions.

LaPorte, Stephen, and Mahmoud Hashemi. "Hatnote Listen to Wikipedia." *Hatnote*, listen.hatnote.com/.

Marvin, Rob. "Tech Addiction By the Numbers: How Much Time We Spend Online." *PCMag*, 11 June 2018, www.pcmag.com/article/361587/tech-addiction-by-the-numbers-how-much-time-we-spend-online.

"Mobile OS Market Share 2018." *Statista*, www.statista.com/statistics/266136/global-market-share-held-by-smartphone-operating-systems/.

Park, Jane. "Creative Commons & Cultural Heritage." *LinkedIn SlideShare*, 12 Dec. 2014, www.slideshare.net/janeatcc/cc-cultural-heritage.

Reagle, Joseph Michael. *Good Faith Collaboration: the Culture of Wikipedia*. MIT Press, 2012.

Stauber, Matan. "Timeline of History." *Histogramy*, histography.io/.

"The Declaration of Independence: Full Text." *Ushistory.org*, Independence Hall Association, www.ushistory.org/declaration/document/.

"The MIT License." *The MIT License*, Open Source Initiative, opensource.org/licenses/MIT.

"Usage of Web Servers Broken down by Ranking." *W3Techs*, 2019, w3techs.com/technologies/cross/web_server/ranking.

"Welcome to Europeana Collections." *Europeana Collections*, www.europeana.eu/portal/en/about.html.