

Digital Activism

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Wirtschaftsinformatik: Web & Social Media Analytics

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In this paper we will be evaluating the use of Web Analytics to improve community outreach for the for-Future groups during the 2020/2021 Covid-19 Pandemic.



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List of Abbreviations

| | |
|-----------------|-------------------------------------|
| APA | American Psychological Association |
| COVID-19 | Coronavirus Disease 2019 |
| DS-GVO | Datenschutz-Grundverordnung |
| FFF | Fridays for Future |
| GDPR | General Data Protection Regulation |
| KFF | Kölle for Future |
| KPI | Key Performance Indicator |
| MAPA | Most Affected People and Areas |
| P4F | Parents for Future |
| PII | Personally Identifiable Information |
| RSS | Really Simple Syndication |
| SQL | Structured Query Language |
| URL | Uniform Resource Locator |

1 Introduction

1.1 Digital Activism

Since early 2020, the world is in various stages of lockdown, with a mandate for social distancing. We've suspended meetings with family, friends, and colleagues. We've canceled all large gatherings.

This has a profound effect on all activism, including climate activism. We had to move most activities to the digital realm. Organizing protests and keeping the momentum alive is not easy during the lockdown. Activists will have to perform online and offline actions to keep the pressure up and maintain awareness of the impending climate emergency.¹ Actions could include Twitter storms and massive Zoom calls, in addition to the more traditional rallies.²

But not all is doom and gloom - moving part of the activism into the aether did enable a much wider reach for some groups and actions. With participation no longer tied to location, new worldwide groups and activist collectives emerged.

One example is FFF Digital with their motto "We are still here". Having only digital means for direct action can be tiring and cumbersome, but FFF Digital gives a voice to the Global South and most affected people and areas (MAPA); a voice that can be heard all over the globe. FFF MAPA is now a distinct Twitter channel amongst all other countries.

There are many forms of digital activism, mainly of social media. Here we will focus on a more traditional medium, a climate activists' blog for our hometown, Cologne.

1.2 Gender-neutral Pronouns

Our society is becoming more open, inclusive, and gender-fluid, and now I think it's time to think about using gender-neutral pronouns in scientific texts, too. Two well-known researchers, Abigail C. Saguy and Juliet A. Williams, both from UCLA, propose to use singular they/them instead: "The universal singular they is inclusive of people who identify as male, female or nonbinary."³ The aim is to support an inclusive approach in science through gender-neutral language.

In this paper, I'll attempt to follow this suggestion and invite all my readers to do the

¹See *Vinter, R. (2021): Climate protesters gather in person and online. [18]*

²See *Morresi, E. (2021): Protest in a pandemic. [11]*

³*Saguy, A. (2020): Why We Should All Use They/Them Pronouns. [13]*

same for future articles. Thank you!

If you're not sure about the definitions of gender and sex and how to use them, have a look at the definitions⁴ by the American Psychological Association.

⁴See *APA (2021): Definitions Related to Sexual Orientation*. [1]

2 Data Source and Wrangling

2.1 Data Source

2.1.1 The Group

Kölle for Future is a regional umbrella organization for several for-Future groups in Cologne, mainly Fridays for Future, Students for Future, Parents for Future, Grannies for Future, Teachers for Future, Psychologists for Future, and Scientists for Future.

The group does not have a formal structure but follows the organizational structure of its main actors. As in most grass-roots organizations, most significant decisions are made in plenary sessions, sometimes with majority voting, sometimes through consensus. The decision process is generally speaking not fast - although I got permission to perform the analysis on our blog from the Parents' plenary session, implementing the results of this analysis will take time. Experiments, such as making changes to a form and observing the results, will need to follow the group's decision-making process.

2.1.2 The Blog

As part of our overall social media presence and digital activism strategy, we operate a blog for KFF at the following URL: <https://koelle4future.de/>.

With our Facebook page and several messenger channels, the blog is the primary medium of broadcasting regional news and events to all for-Futures in and around Cologne.

It is an integral part of our effort to keep the groups together and engaged during the pandemic when we cannot meet in person. Part of the KFF activism has become digital, with bi-weekly virtual rallies (aka #DigitalStrike) that we hold on Zoom and advertise through the blog.

In this paper, I will look at the blog's traffic data and analyze that data. The goal is to understand the performance and reach of a blog post based on its content. With this information, we want to improve our outreach and better serve our community.

2.1.3 Social Media and Loneliness

Social distancing ("six feet apart") is the critical element of containing the spread of Sars-CoV-2. Unfortunately, it's also the best method to stop the spread, which is easy for some but very difficult for others.

According to a recent study conducted by the American Psychological Association, social distancing over an extended period can increase loneliness and significantly affect people's health.⁵

In their study, the researchers hypothesized that an increase in support from others, perceived or actual, can significantly offset that feeling of loneliness.

One means to support the members of our community is through an increase in interaction on social media. To maximize outreach, we use all kinds of channels in parallel and include a blog. We hope that the more engaging a blog post is, the better are its chances to reach people and be entertaining or otherwise beneficial. The main goals are to keep our community engaged and to combat loneliness.

Another means to reach out to our community is through virtual meetings with video. However, here we will not look into this or in any other channel than our blog.

2.1.4 Hate Speech

Besides loneliness, another aspect of moving to the digital realm in the Covid-19 pandemic is an increase in Hate Speech, especially in social media. We aim to offer a safe and welcoming digital space in our blog and our other platforms and restrict the use of hateful words in comments and derogatory terms.

With Covid-10, as with any other illness, comes stigma, and we need to be especially aware not to stigmatize people who have contracted the virus and might be on a long path to recovery.⁶ During the pandemic, it's imperative to be inclusive to all people, inside and outside of our community.⁷

2.1.5 Ableism

There is also an increase in violence in the written language⁸, with an increase in the use of derogatory ableist terms. A good example is the term "Covidio***", which is ableist and should not be used, according to the scientist Jason von Juterczenka.⁹

Being mindful in communication, online and offline, requires careful evaluation of the terminology we use in our posts and comments. Sometimes it also requires a certain

⁵See *Luchetti, M. (2020)*: The trajectory of loneliness in response to COVID-19. [10]

⁶See *UNAIDS (2020)*: Addressing stigma and discrimination. [16]

⁷See *TIME's UP (2020)*: Equity and Inclusion During Crisis. [15]

⁸See *Brown, L.X.Z. (2014)*: Violence in Language. [2]

⁹See *Juterczenka, J.v. (2021)*: Begriff "Covidio***". [19]

level of restraint. For our communication, we use a handy reference to ableist terms¹⁰ that we want to avoid.

2.1.6 Climate Anxiety

We need to place special consideration on climate anxiety with the for-Future groups. The knowledge and understanding of the coming climate catastrophe can be overwhelming and lead to anxiety attacks and depression. As a group, we aim to spread as much a positive image and outlook on the future as possible. We do not want to overwhelm our community, but at the same time we need to focus on the necessity of immediate action and convey a sense of urgency.

According to a recent study, the group in Cologne is mainly White, an issue that a lot of for-Future groups in the Global North have, and we are thus prone to a higher level of anxiety.¹¹

2.2 Web Traffic Analysis

2.2.1 Web Traffic KPIs

Web analytics belongs to the domain of the big search engines, and Google Analytics is the market leader. Web analytics plays a significant role in evaluating a website's performance.

As a marketing category, a blog is considered inbound marketing. It tries to offer interesting content and engage its readers, but it does not reach out by itself. Yvonne Romes identifies a couple of important KPIs for inbound marketing.¹²

Unfortunately, not a lot of these KPIs are present in our blog's metrics. I will hence focus on the metrics that the statistics module offers. To analyze the data, I will mainly use visualization and correlation to identify areas where we could improve the blog's outreach.

2.2.2 Data Collection

We collect metrics for the Kölle for Future Blog on the web host itself; we are not using an external service, such as Google Analytics or Plausible for this. We host the blog on WordPress in a virtual private instance.

¹⁰See *Brown, L.X.Z. (2021): Ableism/Language.* [3]

¹¹See *Dellinger, AJ. (2021): The connection between climate anxiety and white fragility.* [6]

¹²See *Romes, Y. (2020): 10 Inbound KPIs, die jetzt auch Personaler kennen sollten.* [12]

To collect metrics, we use the wp-statistics plugin¹³ which stores its data in Wordpress' MariaDB database.

I exported the data from the blog as CSV files for analysis.

2.3 Data Wrangling

2.3.1 Original Columns

We have six files in total. First, let's have a look at each of the files' contents and the original columns.

The wp-admin table covers the admin access to the blog instance.

Listing 1: wp-admin

```
"date", "IP", "hostname"
```

The wp-comments table holds all information pertaining to comments, which will greatly help us in evaluating engagement with the individual posts.

Listing 2: wp-comments

```
"comment-ID", "comment-post-ID", "comment-author",  
"comment-author-email", "comment-author-url",  
"comment-author-IP", "comment-date", "comment-date-gmt",  
"comment-content", "comment-approved", "comment-parent",  
"comment-type", "user-id", "comment-alter-id",  
"meta:ct-checked", "meta:ct-checked-now", "meta:ct-bad",  
"meta:ct-hash", "meta:akismet-result",  
"meta:akismet-history", "meta:akismet-as-submitted"
```

The wp-pages table has all individual wordpress pages and posts and the number of impressions; "id" links to "comment-post-ID" i wp-comments.

Listing 3: wp-pages

```
"page-id", "uri", "type", "date", "count", "id"
```

The wp-search table contains information of search engine referrals; "visitor" links to the "id" of wp-visitor.

¹³See *VeronaLabs OÜ (2021): Documentation*. [17]

Listing 4: wp-search

```
"ID", "last-counter", "engine", "host", "words", "visitor"
```

The wp-visits table shows total number of visits per day.

Listing 5: wp-visit

```
"ID", "last-visit", "last-counter", "visit"
```

The wp-visitors table has the information for each unique visitor and links all other tables together.

Listing 6: wp-visitor

```
"ID", "last-counter", "referred", "agent",  
"platform", "version", "UAString", "IP",  
"location", "user-id", "hits", "honeypot"
```

2.3.2 Removing PII

There's quite a lot of personally identifiable information in these tables that I will remove before starting the analysis:

- wp-admin: The information in this table is only affecting me as the author of the paper, so no change is necessary
- wp-comments: I'll remove anything that could potentially identify the person commenting as well as all meta information and an empty column.
- wp-pages: The table has no personally identifiable information
- wp-search: The table has no personally identifiable information
- wp-visit: The table has no personally identifiable information
- wp-visitor: I'll remove all information, including IP Address, that could potentially identify the visitor

Removing columns from CSV files is an easy task for any spreadsheet program.

2.3.3 GDPR Compliance

We can assume that wp-statistics is not GDPR-compliant from the amount of data that we need to remove, even though it claims that it is.¹⁴ Furthermore, there is no information visible on the blog that we will process personal data, as required by DSGVO. The collection of IP addresses is challenging to justify and completely unnecessary.

To achieve GDPR compliance and continue analysis, I will recommend the following actions for the plugin configuration:

- Enable Geo-IP location data
- Disable collection of IP addresses

2.3.4 Removing Spam

Spam is a big issue for WordPress blogs; the blogs are easily identifiable on the web and share common vulnerabilities; we can safely assume that our blog is prone to spam access. The blog's language is German, so I think that access from non-German speaking countries is likely to be fraudulent. It is a broad assumption and might exclude legitimate traffic. Still, for this paper, I will go with the hypothesis and remove traffic from countries other than Germany, Austria, and Switzerland.

To do this I use the shell and filter approximately 18000 page impressions:

Listing 7: Removing Spam

```
$ wc -l wp-visitor-2021-04-05.csv
68027 wp-visitor-2021-04-05.csv

$ fgrep -e "DE" wp-visitor-2021-04-05.csv | wc -l
49883

$ fgrep -e "AT" wp-visitor-2021-04-05.csv | wc -l
519

$ fgrep -e "CH" wp-visitor-2021-04-05.csv | wc -l
264

$ fgrep -e "CH" -e "AT" -e "DE" wp-visitor-2021-04-05.csv \
> wp-visitor-2021-04-05-nospam.csv
```

¹⁴See *Kohr, J. (2020): Matomo vs. WP-Statistics. [9]*

```
$ wc -l wp-visitor-2021-04-05-nospam.csv
50564 wp-visitor-2021-04-05-nospam.csv
```

2.3.5 Count Data Notebook

Now that we have removed all PII items and filtered spam, it's time to analyze the data. To do this, I'll again use a data notebook from Count.







Count data notebooks combine SQL data and text quickly, much like Jupyter notebooks combine Python code and text. Count aims to support teams with data-driven decision-making and has recently come out of open beta.¹⁵

To load the tables into the data notebook, I created a BigQuery database on my Google Cloud instance and connected the Count data notebook with a read-only service account. As a final results, here's the list of tables for the notebook:

Figure 1: Database Tables



Tables

- >  **wp-admin** (koelle_for_future)
- >  **wp-comments** (koelle_for_future)
- >  **wp-pages** (koelle_for_future)
- >  **wp-search** (koelle_for_future)
- >  **wp-visit** (koelle_for_future)
- >  **wp-visitors** (koelle_for_future)

Count notebooks make exploration of data accessible. Unfortunately, the internal format is Markdown, and import into LaTeX is not entirely without problems; in the end, it did

¹⁵See *Count.co* (2020): About Count. [4]

work for the following two chapters. Count also no longer allows anonymous (read) access to the notebooks; otherwise, I would have shared the link here.

3 Data Exploration

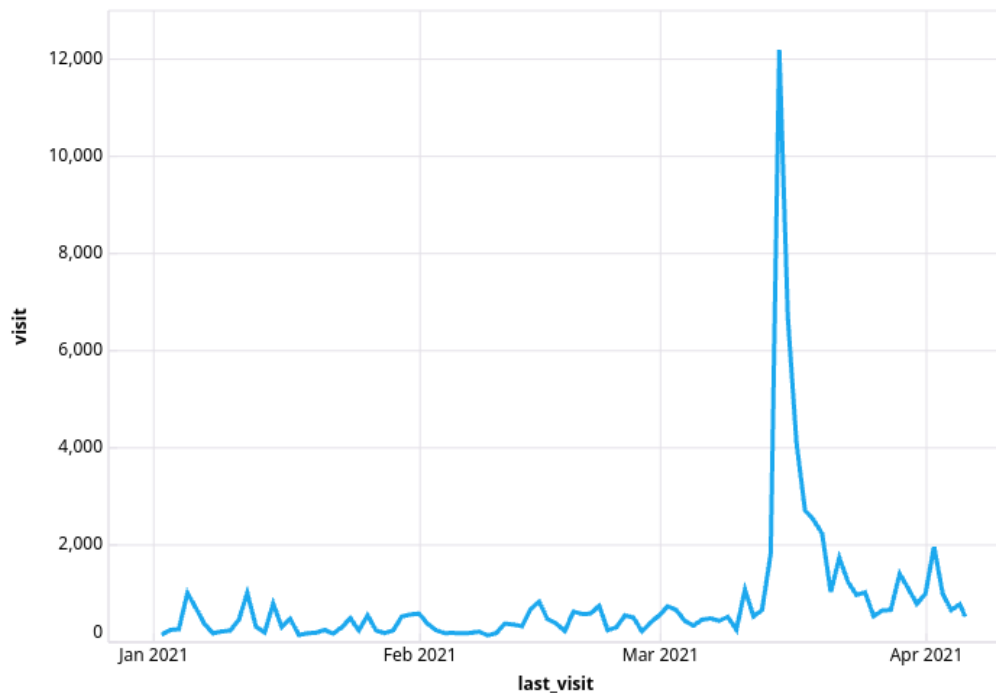
3.1 Access

Now that we have all the data from wp-statistics in our BigQuery tables, we're ready to start the exploration.

Let's start by looking at the number of visitors this year. We can see a huge spike around the global climate strike on March 19 and a smaller one before Easter:

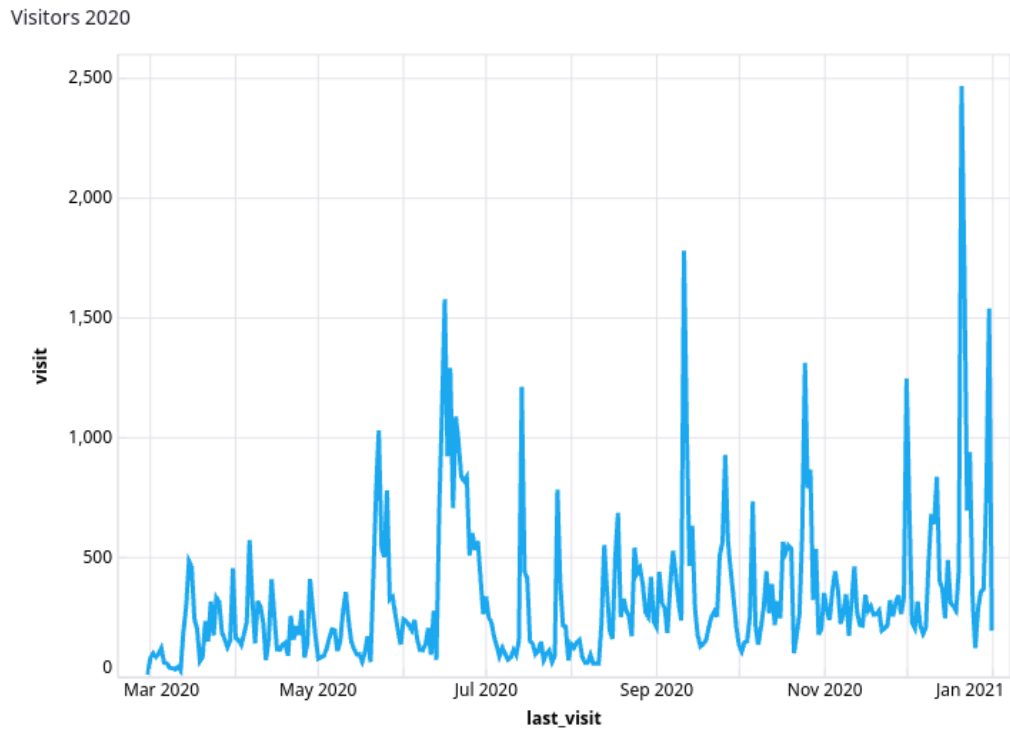
Figure 2: Visitors 2021

⋮ Visitors 2021



A global climate strike is a significant event in our groups' calendar, and I am pretty happy that we were able to provide our readers with sufficient information about it.

Let's move to the past year. We can see similar significant spikes around the dates for global and local strikes, and local elections:

Figure 3: Visitors 2020

The external calendar data again correlates with the access data; the blog thus seems to fulfill an essential role in keeping our community informed and engaged.

3.2 Search Engines

In addition to the people who have bookmarks for the blog, a significant amount of traffic comes from the major search engines:

Figure 4: Search Engines

⋮ Search engines

| engine | sum_visitor |
|------------|-------------|
| google | 366,300,671 |
| baidu | 201,863 |
| bing | 200,751 |
| qwant | 67,825 |
| duckduckgo | 535,753 |

2 columns, 5 rows

Google is the market leader, but DuckDuckGo is a (distant) runner-up, and we'll see DuckDuckGo again a little bit further down.

Looking at the main key words, we find "Klimastreik" (climate strike) and "Wahl" (local elections) in various forms in our data:

Figure 5: Search Term Streik

Search term streik

| words |
|----------------------------------|
| klinastreik be 19.03 k%C3%B6ln |
| klimastreik k%C3%B6ln 19.03.2021 |
| klimastreik k%C3%B6ln 19.03.2021 |
| klimastreik 25.09 k%C3%B6ln |
| klimastreik 25.09 in k%C3%B6ln |

1 columns, 10 rows

Figure 6: Search Term Wahl

Search term wahl

| words |
|---------------------------------|
| wahlomat k%C3%B6ln kommunalwahl |
| klima k%C3%B6ln wahlomat |
| kommunalwahl k%C3%B6ln wahlomat |
| wahlomat%20k%C3%B6ln |
| kommunalwahl k%C3%B6ln wahlomat |

1 columns, 16 rows

This data supports our findings so far that people inside and outside the community turn to the blog for information for the regular climate strikes and the local elections.

3.3 Admin Access

Because we have the data, let's have a look where our admin users come from:

Figure 7: Admin Access

Admin access

| hostname | count_distinct_date ↓ |
|-------------------------------------|-----------------------|
| tmo-101-86.customers.d1-online.com | 7 |
| tmo-102-16.customers.d1-online.com | 7 |
| tmo-101-227.customers.d1-online.com | 7 |
| tmo-100-2.customers.d1-online.com | 6 |
| tmo-121-66.customers.d1-online.com | 3 |

2 columns, 9 rows

Not surprisingly, with a few exceptions, admin access seems to come from the Deutsche Telekom network, the primary carrier in Germany. Not that this data point is of huge interest, but we can at least rest assured that we most likely were not hacked or pwned.

3.4 Referrals

A much more interesting data point than admin access is the referrals, this time not from the wp-search index but from the wp-visitor table itself:

Figure 8: Referrals

| Referrals | |
|---|------------------------------|
| referred | count_distinct_last_counter↓ |
| https://www.google.com/ | 373 |
| https://www.ecosia.org/ | 287 |
| https://www.google.de/ | 271 |
| http://m.facebook.com/ | 242 |
| http://m.facebook.com | 198 |
| https://m.facebook.com/ | 192 |
| https://l.facebook.com/ | 184 |
| https://www.facebook.com/ | 139 |
| https://duckduckgo.com/ | 138 |
| android-app://org.telegram.messenger/ | 105 |
| https://t.co/ | 95 |
| https://www.bing.com/ | 84 |
| https://parentsforfuture.de/de/k%C3%B6ln | 82 |
| https://parentsforfuture.de/ | 71 |
| android-app://org.telegram.messenger | 69 |

2 columns, 956 rows

We can still see Google and other major search engines in the referrals. Interestingly enough, though, the more privacy-oriented ones (Ecosia, DuckDuckGo) are pretty high on the list, too.

In addition, we can also see several referrals from our Twitter, Facebook, and Telegram channels. It indicates a solid connection with the community and tight integration of the blog with our other social media sources, the blog's primary goal.

To keep the community together, to combat loneliness and climate anxiety, a strong connection through as many virtual channels as possible is vital for our outreach work.

3.5 Platforms

As we previously saw in the referrals, the number of people in our community using alternative search engines is relatively high. Will we see the same differences when we look at the OS and browser?

Let's start with the operating system:

Figure 9: Operating System

Operating System

| platform | count_distinct_last_counter↓ |
|-----------|------------------------------|
| Windows | 403 |
| Android | 401 |
| iOS | 399 |
| OS X | 395 |
| Linux | 326 |
| Ubuntu | 277 |
| Chrome OS | 44 |

2 columns, 24 rows

Access from mobile is pretty evenly split between Android and iOS, as I would expect it to be.

However, the desktop distribution looks quite interesting: Even though Windows and Mac OS X are again pretty tight, the number of Linux users is far higher once we sum up all the distributions. It is a very different distribution from the overall distribution of desktop operating systems, where the percentage of Linux users usually is in the lower single digits.¹⁶

Now, let's look at the browser figures:

Figure 10: Browser

Browser

| agent | count_distinct_last_counter↓ |
|------------------|------------------------------|
| Firefox | 402 |
| Chrome | 401 |
| Safari | 399 |
| Firefox Mobile | 293 |
| Samsung Internet | 290 |

2 columns, 46 rows

Again, this is a very different and exciting distribution: Firefox and Firefox Mobile together are leading the access, easily outperforming Chrome or Safari.

¹⁶See *Frank, C. (2021): Web Traffic Analysis - Predicting Blog Post Performance.* [8]

This distribution is a continuation of what we saw before. Our community of climate activists does not like to rely on mainstream search engines, mainstream operating systems, or mainstream browsers.

A quick test on WebPageTest showed a significant difference in loading times and web vitals for Chrome and Firefox. Given the high number of Firefox users on our blog, there's room for improvement here.

From the data, there are a couple of key takeaways for the future before we move on to the next chapter:

- We should focus SEO more on Ecosia and DuckDuckGo, and less on Google
- Firefox is the most prevalent browser, on the Desktop and mobile devices, we should optimize the blog theme for it
- Quite surprisingly, Linux is the most favored desktop operating system; we should take that into account for all media formats, especially for images and videos
- Mobile access is important, even though still less than 50%, and we should improve the interface design and speed by optimizing the theme for mobile access

4 Data Analysis

4.1 Page Impressions

We have completed our data exploration; now, it's time to focus on the analysis and some of the more common KPIs in web analytics and inbound marketing.

Unfortunately, wp-statistics does not offer detailed measurements for interaction or click-through rates, unlike Plausible¹⁷ or Matomo; we'll need to extrapolate the data and visitor behavior from our knowledge of the site and use whatever metrics the tool offers.

Let's first look at the anatomy of the blog:

Figure 11: Page Types

| Types | |
|--------|---------------------|
| type | count_distinct_id ↓ |
| post | 417 |
| page | 21 |
| feed | 8 |
| home | 1 |
| search | 1 |

2 columns, 5 rows

We had 417 separate posts on the blog in early April, together with 21 utility pages, not counting the home page. The home page is where people start browsing when they do not come from a search engine or a social media reference; this could be from a bookmark or the main URL.

The 21 pages form the top-level menu of the blog, and we will ignore them from here on. Also, we will not include the RSS Feed or the search function in our evaluation.

Let's drill down a bit and look at the page impressions by type:

¹⁷See *Frank, C. (2021): Web Traffic Analysis - Predicting Blog Post Performance.* [8]

Figure 12: Impression by Page Type

Impressions by type

| type | sum_count ↓ |
|--------|-------------|
| post | 96,640 |
| home | 20,157 |
| page | 7,544 |
| search | 754 |
| feed | 184 |

2 columns, 5 rows

The most read items on the blog are the individual posts, which is good for us. It might not sound obvious, but if a user accesses the main page from the URL and scrolls down, we have no way of determining which of the recent posts they might have read.

For this reason, I'll concentrate further analysis on the page impressions of the posts alone and ignore the other types.

A key question for our analysis is to determine which category of posts is of most interest to our readers. We know the most-used search terms already, but we now need to see whether this is true for the actual posts. As a next step, let's try to find the top 12 most-read posts:

Figure 13: Top Performing Posts

Top-performing posts

| id | sum_count ↓ |
|-------|-------------|
| 6,634 | 23,723 |
| 3,125 | 5,162 |
| 3,159 | 4,082 |
| 5,009 | 3,636 |
| 3,179 | 3,279 |
| 3,933 | 2,826 |

2 columns, 417 rows

We have the post's id, but identifying the actual posts is a bit of manual work: wp-statistics, unfortunately, records in the URI all Url-parameters, including tracking parameters such as fbclid. There's an option in wp-statistics to disable that behavior, but not retroactively. Also, wp-statistics does not record the post title itself.

By inspecting the URL and ID, I manually created a new table which includes the actual blog title, together with its date and visits:

Figure 14: Top Performing Posts

Top-performing posts

| date | count | title |
|------------|--------|---|
| 3/13/2021 | 23,728 | NRW-Eltern nehmen Corona-Notbremse selbst in die Hand... |
| 5/20/2020 | 5,162 | Kohleausstiegsgesetz mutiert zum Klima- und Wirtschafts... |
| 5/16/2020 | 4,082 | Briefe gegen das #KohleEINstiegsgesetz |
| 9/16/2020 | 3,636 | Alle Infos zum globalen Klimastreik am 25.09. |
| 5/21/2020 | 3,279 | Kohleverstromung ist nicht mehr wirtschaftlich! |
| 7/12/2020 | 2,826 | EU-Beschwerde gegen das KohleEINstiegsgesetz eingereic... |
| 3/11/2021 | 1,679 | 19.03.21 – globaler Klimasteik auch in Köln |
| 9/5/2020 | 1,632 | Klima-Wahl-O-Mat zur Kommunalwahl in Köln |
| 3/15/2020 | 1,564 | Onlinetalk – Zukunft ohne Zukunft? Wege aus der Klimakri... |
| 8/16/2020 | 1,503 | Autofreie Innenstadt und sechs Milliarden Euro für ein kli... |
| 11/11/2020 | 1,344 | Sei der Kippunkt für die Kohle |
| 5/23/2020 | 1,342 | KohleEINstiegsgesetz: Fordere eine neue Braunkohlenpla... |

3 columns, 12 rows

In addition to the global climate strike and local elections, content that we have identified previously from search, we can now see that the top-performing post is related to Covid-19, which is not surprising, given the severe nature of the current situation in the pandemic.

Going through the top-performing blog posts and combining this information with our results on search in the previous chapter, I was able to identify the top four content categories:

- Covid-19
- Local election
- Climate strike
- Stop fossil fuels

The blog supports the community of climate activists in Cologne and provides the most needed and sought-after information.

4.2 Direct Engagements through Forms

In addition to the posts, the blog also has a contact form and a donation form. Let's have a look and find out if people are actually using them:

Figure 15: Engagement through Forms

Contact form

| uri | sum_count |
|-----------|-----------|
| /kontakt/ | 568 |
| /spenden/ | 118 |

2 columns, 2 rows

Compared to the number of impressions on the posts, these numbers are rather low. It is most likely due to their page design, and a key takeaway for the future could be the following action items:

- Redesign contact form
- Redesign donations

4.3 Direct Engagement through Comments

In addition to reading a post, WordPress allows two forms of direct engagement: pingbacks¹⁸ and comments.

There's one other form of interaction, trackbacks¹⁹, of which we do not have any insight into.

Let's start with the pingbacks and identify the blog posts that are most referenced from other blogs:

¹⁸See *WPBeginner (2021)*: What is Pingback. [20]

¹⁹See *WPExplorer.com (2020)*: WordPress Pingbacks and Trackbacks. [21]

Figure 16: Pingbacks

Pingback

| comment_post_ID | count_distinct_comment_...↓ |
|-----------------|-----------------------------|
| 3,179 | 7 |
| 3,125 | 5 |
| 5,606 | 4 |
| 2,046 | 4 |
| 3,258 | 3 |

2 columns, 50 rows

The two most linked posts are also in the list of the dozen most-visited posts and deal with the urgent need to stop using fossil fuels:

Figure 17: Pingback Targets

Pingback targets

| date | count | title |
|-----------|-------|--|
| 5/20/2020 | 5,162 | Kohleausstiegsgesetz mutiert zum Klima- und Wirtschafts... |
| 5/21/2020 | 3,279 | Kohleverstromung ist nicht mehr wirtschaftlich! |

3 columns, 2 rows

With an open-pit lignite mine nearby, fossil fuels, or better the need to stop using it, is on everybody's mind, and our community seems to be a valued source for reference information.

For the final part of the engagement analysis, let's look at comments. Leaving a comment is the most active form of engagement a blog can have - there are no "Like" or "Share" buttons, to interact in any other way than reading a post the only option they have is to leave a comment:

Figure 18: Comments

| comment_post_ID | count_distinct_comment_...↓ |
|-----------------|-----------------------------|
| 4,018 | 7 |
| 2,810 | 6 |
| 6,634 | 5 |
| 5,286 | 4 |
| 3,159 | 4 |

2 columns, 32 rows

The two posts with the most comments are about participating in the climate accord and a lignite complaint, and the third is our most visited post on Covid-19:

Figure 19: Comment Targets

| date | count | title |
|-----------|--------|--|
| 3/13/2021 | 23,728 | NRW-Eltern nehmen Corona-Notbremse selbst in die Hand... |

3 columns, 1 rows

We can again see significant engagement in our core messaging from the community.

The blog is an integral part of our digital outreach and helps us keep the activism alive during the Covid-19 pandemic.

To finish, we'll look at multiple interactions, i.e. whether we have comments on comments:

Figure 20: Comments on Comments

| comment_post_ID | count_distinct_comment_...↓ |
|-----------------|-----------------------------|
| 5,452 | 3 |
| 2,810 | 3 |
| 3,159 | 2 |
| 6,634 | 2 |
| 5,286 | 1 |

2 columns, 5 rows

And there are quite a few - for a blog, this is the highest form of interaction: A post that's not only read and commented on but where the readers also have replied to a previous comment.

4.4 Improving Analytics

From the analysis of the data and given the difficulties with extracting basic metrics, I think an essential task for the future will be to improve the web analytics capabilities of the blog through the use of a different tool, such as Matomo or Plausible.

In a previous paper, I have covered Plausible in more detail and compared it with other web analytics tools.²⁰ I will not go any further into details of the software itself here.

Figure 21: Plausible



In addition to a better tool for web analytics, I will also recommend the following tasks:

- Paying attention to web vitals²¹
- Installing a caching plugin to speed up mobile access²²

4.5 Sustaining Engagement

From analyzing the web traffic data, we can safely deduce a couple of items:

²⁰See Frank, C. (2020): Usefulness of open-source tools for web analytics in E-Marketing. [7]

²¹See Sousa, B. (2021): Google Web Vitals best practices for single-page apps.[14]

²²See Crowe, A. (2021): WordPress Checklist. [5]

- To sustain the current level of high community engagement, we should continue our focus on local events (elections and issues around fossil fuels) and the major global crises (Covid-19 and the climate emergency)
- We've found out that digital activism supports offline activism and can help in combating loneliness
- To keep our communication safe and open, we need to fight hate speech, Ableism, and all other forms of negative -isms in our communication
- To further improve our outreach, we should implement the lessons learned above

5 Summary

From our analysis, we can see that it makes a lot of sense to focus the the Kölle for Future blog posts on the two major crises of our time, the Climate Emergency and the COVID-19 pandemic.

Using wp-statistics for web analytics was initially an easy option; however, if we want to continue the in-depth analysis of the performance of our blog, we might consider moving to another tool or platform.

The overall result is not a surprise; these two issues are the most talked-about issues on all media and are on everybody's mind all the time. The data showed us some more actionable items, such as putting more focus on mobile users and asking us to make sure that we cater to browsers and platforms that are not mainstream.

But, most importantly, the data showed us that we were able to engage with the KFF community and the broader network of climate activists with the help of our blog. When it's de rigueur to social distance, it is vital to use alternative means to reach out, especially means that do not require physical contact.

From the past year, we can conclude that digital activism works, both as a support for the community and as a way of protest. Quite surprisingly, we found out that our politicians indeed pay attention to social media.

Maintaining connections during the pandemic is the most crucial part of combating loneliness and building up resilience, and it is the focus of our outreach work.

Happy Activism!

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