

University's commercialisation arm. The research was supported in part by UK Research and Innovation (UKRI), the European Research Council, the Royal Academy of Engineering, and the Cambridge Trust.

For further reading

1. S. Kar et al., Direct air Capture of CO₂ for Solid Fuel Production in Flow. *Nat. Energy* (2025). <https://doi.org/10.1038/s41560-025-01714-y>.

AMPERE's web project: Progress, improvements, and future

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AMPERE's website has continued to evolve, reaching significant milestones that reflect steady growth in both usability and audience engagement. We're excited to share the key elements driving our progress, along with new strategies that are shaping a more dynamic and user-focused platform.

Organized and Accessible Content

One of the most impactful improvements has been the reorganization of our content. Articles, resources, and updates are now grouped into clearly defined categories, making it easier for visitors to find exactly what they're looking for.

This structured approach not only improves navigation but also ensures that the right information is available to the right audience. By creating an intuitive and logical content hierarchy, we've minimized the time users spend searching for information while maximizing their satisfaction.

SEO: A Path to Greater Visibility

To ensure that our platform reaches as many people as possible, we've invested heavily in refining our search engine optimization (SEO) strategies. This includes optimizing keywords, improving meta descriptions, and improving page structures. The result? A noticeable increase in organic search traffic. More users are discovering our site through

search engines, demonstrating the power of tailoring digital content to align with search algorithms while maintaining a user-first approach.

A Growing and Engaged Audience

Our analytics continue to show a steady increase in real visitors (those who actively interact with the platform). The most popular sections (currently the pages "Homepage", "Events", "About Us", "Newsletter", and "Issue 120") show that our content resonates with users' interests.

Advanced tools like Matomo allow us to dive deeper into user behavior, giving us insights into how visitors navigate the site, how long they stay, and what keeps them coming back. These data-driven improvements ensure that our platform remains relevant and engaging.

The graph below (**Figure 1**) compares the website's organic visits from September to those in October, highlighting a clear improvement over time.

The data below (**Figure 2**) provides a comprehensive overview of the website's performance over the two months in question. It shows not only an increase in the frequency of visits and the number of users but also a growing interest in the content, which has successfully reached a wider audience.

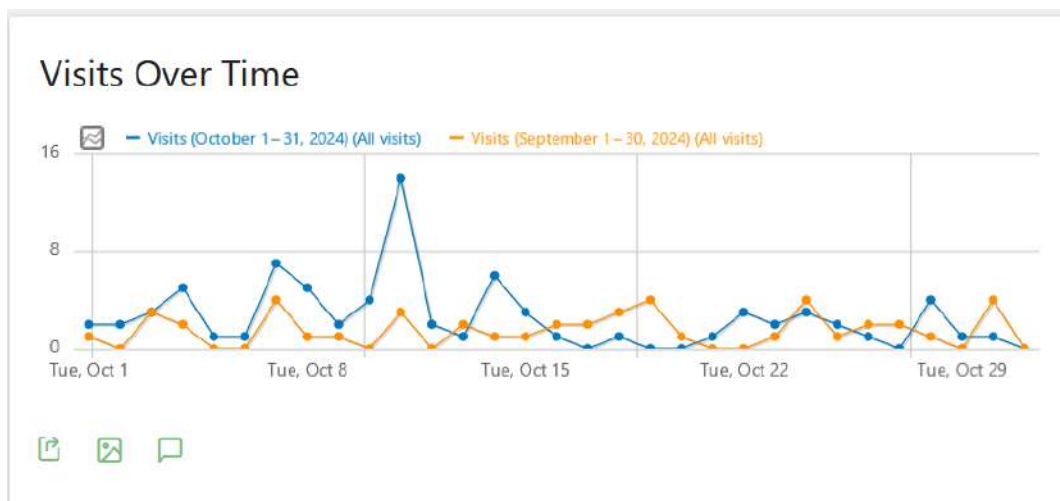


Fig. 1: Comparison of the September 2024 and October 2024 organic visits to the AMPERE website.

Visits Overview

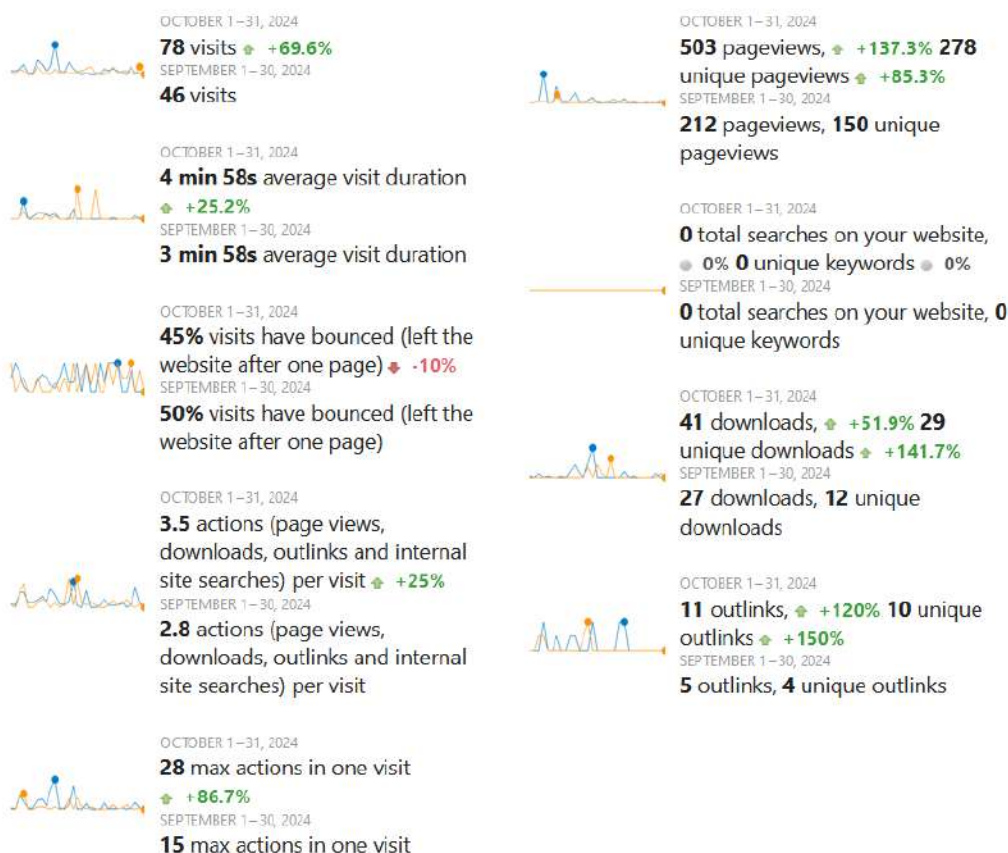


Fig. 2: Overview of the AMPERE website performances over September and October 2024.

Faster, Smarter Technology

Thanks to our Content Delivery Network (CDN), content is delivered quickly and seamlessly, regardless of the user's location. This efficiency improves the user experience, especially during

periods of high traffic, and has a positive impact on our SEO, as search engines prioritize sites with optimal loading speeds.

The chart below (**Figure 3**) shows that, over the last 30 days, our website handled a total of over

224.79k requests through the Cloudflare CDN network. A significant proportion of these requests (128.25k) were served directly from the cache, ensuring faster load times and reducing strain on our servers. A cache is a system that stores copies of frequently requested content, allowing it to be delivered more quickly to users without having to repeatedly retrieve it from the main server. This demonstrates the efficiency of our technological infrastructure, providing a seamless experience for users.

The following chart (**Figure 4**) illustrates the growth of our audience, with 10.77k unique visitors recorded over the last 30 days. The daily peak reached 891 users, showing that our site continues to attract an increasing number of visitors. These figures reflect the success of our content and SEO strategies in making our platform more accessible

and engaging. In addition to human visitors, the site is increasingly being noticed by search engines and automated monitoring tools (bots and crawlers). This aspect is crucial to strengthening our online presence and making it easier for users to find us.

Looking Ahead

These advances are just the beginning. The increased visibility, engagement, and accessibility of our platform motivates us to continue innovating. By listening to our audience and leveraging technology, we aim to create an even richer experience.

We're deeply grateful to our growing community for their trust and participation. As we move forward, we remain committed to providing quality content, streamlined usability, and the tools to keep our audience informed and connected.

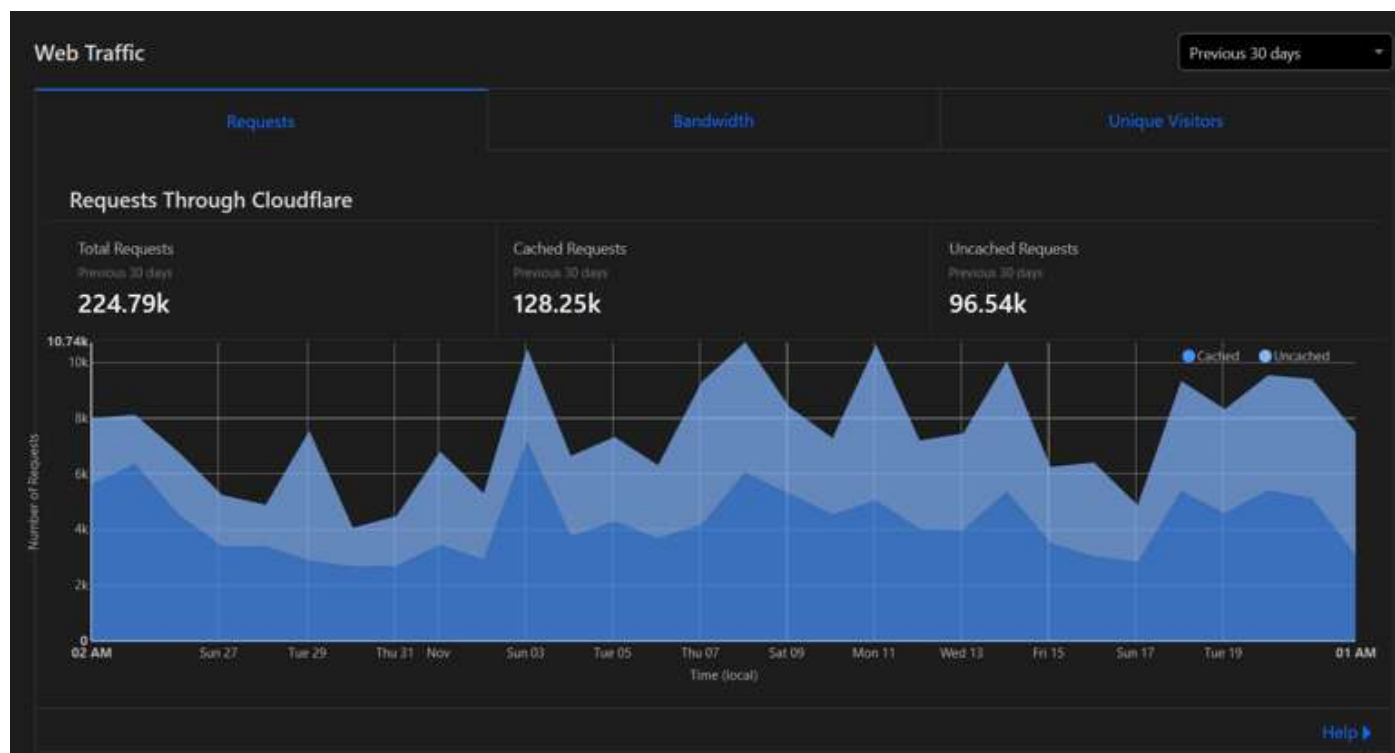


Fig. 3: Requests through Cloudflare over a period of 30 days.

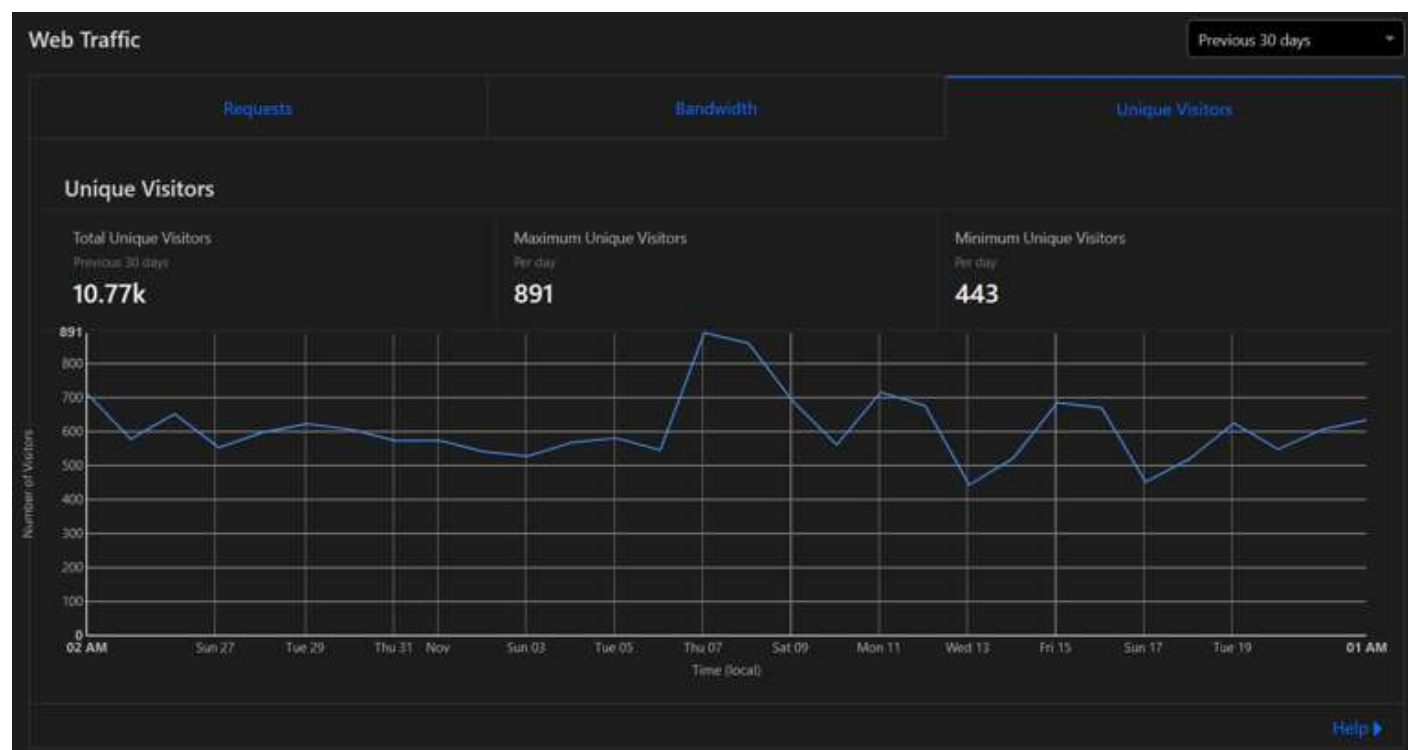


Fig. 4: Website traffic over the same period of 30 days.