

Help our research!

Scan the code to access our 5-minute survey and support our endeavour to preserve the web.



Exhibition Credits

Curators: Andrea Kocsis (Project lead) and Dorsey Kaufmann (Lead artist)

Artists: Dorsey Kaufmann & Parker Kaufmann (Feeling Data Studio), Mansi Manoj, Qianhui Meng, Shuyu Zhang

Production team: Miriam Walsh, Peter Bentley, Mark Kobine, Evan Morgan, Ray Interactive, Pam Wallace, Ginie Naisby

The data was generously offered by the National Library of Scotland.

Contributors: Sarah Ames (Digital Scholarship Librarian), Graeme Hawley (Head of Published Collections), Eilidh MacGlone (Web archivist), Trevor Thomson (Curator), and the Published Collections Team.

Supported by

This project is funded by the ESRC Festival of Social Science, the National Library of Scotland, the British Academy and the Leverhulme Trust, with support from the Institute for Design Informatics, Inspace, and Edinburgh Futures Institute. This programme is part of the Being Human Festival, the UK's national festival of the humanities.

Give your feedback to the festival:



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Digital Ghosts

5-16 Nov 2025 (Closed Mon & Tues), Inspace

Digital Ghosts is an exhibition about how the internet forgets. It emerges from an interdisciplinary project led by Dr Andrea Kocsis, in collaboration with multimedia artist Dorsey Kaufmann. Together, they brought together a team of archivists and librarians from the National Library of Scotland, visualization developer Parker Kaufmann, and Informatics MSc students to experiment with computational and creative visualization techniques that invite the public to engage with online decay and web archives.

Event Programme

Exhibition Late and Panel Discussion
6 – 8pm, Thurs 6 Nov 2025

During the Exhibition Late, the team behind the project will host a panel discussion on Scotland's digital footprints. We'll explore how web archives are created, what gets included or left out, and why those choices matter, offering a behind-the-scenes look at the politics of web preservation.

Visualising Presence and Absence in Scotland's Web Archives
1 – 2.30pm, Sat 15 Nov 2025

This workshop explores "digital ghosts"—data that evolves, disappears, or behaves unpredictably. Led by artist Dorsey Kaufmann, whose art transforms Scottish web archive data into immersive visual experiences, we'll examine how visual design can reveal patterns of digital disappearance and question how cultural memory is shaped by what is saved and what is lost.



About the Exhibition

Three of the works were first created by Informatics MSc students Mansi Manoj, Qianhui Meng, and Shuyu Zhang under the supervision of Dorsey Kaufmann. Dorsey and Parker Kaufmann recently launched their data visualization studio *Feeling Data*, which adapted and expanded the students' projects for public interaction, as well as producing two new works. The 'Digital Ghosts' centrepiece is an artist commission in which Kaufmann experiments with physicalising web archive data through UV projection onto cyanotype.

Digital Ghosts by Dorsey Kaufmann & Feeling Data

Using light as both medium and metaphor, Digital Ghosts visualizes the life and death of websites through cyanotype prints exposed to UV projection. Each site's lifespan and topic — ranging from Climate Change to Brexit — determines the duration and movement of light across the wall, gradually developing the prints over a 120-hour performance (5–10 November 2025). As the projection fades, only imperfect cyan-blue impressions remain — leaving material traces of digital memory that question what can truly be captured when the internet forgets.

Dorsey Kaufmann is a data visualisation designer, artist, and researcher who creates interactive interfaces and participatory installations exploring the personal dimensions of data about health, home, environment, and body politics. Her work blends digital design, code, and sculpture to examine how visualisation shapes data literacy, perception, and behaviour.

Digital Coordinates by Parker Kaufmann & Feeling Data

This visualization maps websites from the Scotland on the Internet collection that include identifiable geographic information, showing where in Scotland topics appeared most prominently over time. Determining place online is rarely simple — some sites list addresses, while others reveal location through IP data, domain records, or textual clues. Together, these layers of evidence expose clusters of online activity, from sparse rural traces to dense urban networks, revealing how Scotland's digital landscape has evolved and how unevenly it is preserved.

Parker Kaufmann is a data visualisation specialist and web developer who transforms complex data into clear, engaging visual experiences. With experience across aerospace, healthcare, marketing, and journalism, she builds interactive applications using tools like D3.js and React.

The Life and Death of Music by Mansi Manoj & Feeling Data

Of around 5,600 music-related websites in the Scotland on the Internet archive, nearly half no longer exist on the live web. This interactive visualization traces their disappearance over time: active sites float within a rotating sphere, while those that vanish fall into a digital "puddle" below. Patterns of loss mirror broader shifts—such as the fall of MySpace in 2008, the rise of streaming in 2013, and domain collapses during COVID-19—revealing how grassroots and genre-based sites disappear far earlier than institutional ones.

Pandemic in the Archives! by Feeling Data & Shuyu Zhang

This visualization maps over 1,000 pandemic-related websites and news articles from the Scotland in the News collection (2019–2025). Each dot represents a site, sized by keywords extracted through automated text analysis. It traces how coverage evolved across sectors and time, revealing shifting discourse, uneven preservation, and the dominance of certain voices in Scotland's digital record of COVID-19.

Sites: Surfaced or Submerged by Feeling Data & Qianhui Meng

This motion-activated piece traces how Scotland's web content has shifted over time—from when each site was added to the Scotland on the Internet collection to whether it survives online today or has vanished. Stepping before the work places you in the archivist's mind, where curiosity and circumstance guide what is saved. Patterns emerge: religious sites dominate in 2018–19, sports after the pandemic, followed by arts and lifestyle waves. Each movement reveals both cultural rhythms and human bias—inviting you to ask: if you were the archivist, what would you choose to preserve?

The Research

Led by Dr Andrea Kocsis, this project builds on her National Librarian's Fellowship in Digital Scholarship (2024–25) and the British Academy/Leverhulme-funded research Digital Ghosts – Exploring Scotland's Heritage on the Web. Using the Scotland on the Internet collection at the National Library of Scotland (NLS), it explores how to connect communities with their digital heritage by making web archives more accessible and engaging through creative data-driven methods. The underlying dataset will soon be available via the NLS Data Foundry.