

## History in the making

Now entering its third and final phase, **Living with Machines** has made staggering progress so far in changing the face of digital humanities, using data-driven approaches to shed new light on the Industrial Revolution.

The project, funded by the UK Research and Innovation (UKRI) Strategic Priorities Fund, generates new historical perspectives on the effects of the mechanisation of labour and changes to the lives of ordinary people during the 19th century. It also develops:

- Tools and code components embedded into an infrastructure that can be adapted for and inspire future interdisciplinary research projects.
- New computational techniques to marshal the UK's rich historical collections.

This year, a series of tutorials on computer vision have been developed, and a Python package will shortly be released. Crowdsourcing projects were launched integrating linguistic research questions with tasks that encouraged volunteers to engage with social and technological history

in the pages of 19th century newspapers. The collaboratively developed open-source package **Defoe**, that queries large digital collections, continues to be embraced by other researchers and institutions.

Using image analysis and computer vision, the project team is comparing 9,000 different Ordnance Survey maps over three time periods, to understand locations of industrial buildings and measure how close people lived to services across different regions.

### Looking ahead

The project will deliver high-quality research publications that challenge norms of how research is undertaken and published.

Further ahead, the team also intends to develop new methods and make strategic recommendations to the heritage and higher education sectors, funding councils and policy makers, about the infrastructure required for UK researchers to work with the UK's cultural heritage collections.



“Our work engages with multiple communities. We are speaking simultaneously to academics in the fields of history, digital humanities, archival science, the spatial humanities and geographic information systems (GIS), computational linguistics, computer science and data science. This can be observed from the variety of venues in which the team has published conference papers and delivered talks.”

**Ruth Ahnert**  
Principal Investigator of Living with Machines  
and Turing Fellow