Electronic Life: the interaction of AI and Art

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Research Studio Electronic Life is an initiative devised and led by Ed D'Souza, Sunil Manghani and Tom Savage to collaboratively work across disciplines and the arts to interrogate the role of artificial intelligence in society. The studio developed an AI entity named Rage Machine to interact with Tate Britain's high-profile exhibition, Women in Revolt!, curated by Linsey Young.

Context

Electronic Life is a research studio set up by Professors Sunil Manghani and Ed D'Souza from the University of Southampton, along with Tom Savage, PhD candidate at Imperial College London and former PhD Enrichment Student at the Alan Turing Institute. The project responds to the 'Grand Challenge' of artificial intelligence and works collaboratively across AI, anthropology and art, with a particular focus on empowering young people through creative practice and critical engagement with technology. In 2022, Sunil Manghani was awarded a Research Fellowship at The Alan Turing Institute to explore an interdisciplinary project concerned with the intersection of structuralism and contemporary AI methods.

Sunil was previously an Associate of Tate Exchange (2018–2021), exploring the intersections of art, technology, and society. In 2023 he proposed a public programme to explore ideas around AI at the Tate. Teaming up with University of Southampton colleague Ed D'Souza, the pair were motivated to open up the public conversation about AI, working with young people (16-25 year olds) to explore AI in the context of art and creativity, but also supporting creative and critical skills. This became central to Electronic Life's mission: to provide a forum for provocative ideas and creative practices.

Collaboration with Tate

Sunil and Ed established a good working relationship with Tate through the prior association with Tate Exchange, so although the Tate Exchange closed after the Covid pandemic, key staff from Learning and Partnerships continued to work on community programmes, notably with the Tate Collective Producers, a group of 16-25-year-olds who design and deliver programming for young people by young people, notably the Late at Tate series. This offered a unique platform for testing ideas about AI and creativity with young co-creators.

With funding from the University of Southampton's AHRC Impact Acceleration Grant and HEIF Stimulus funding, alongside generous in-kind support from Tate and the Alan Turing Institute's AI & Arts Group, Electronic Life has been able to work with young people, including various community groups based in London, to develop creative skills through AI and social practice, positioning the project as both a research initiative and a platform for social engagement.

Based at the Digital Studio at Tate Britain, which had been financially constrained following the Covid pandemic, Sunil and Ed worked closely with

Julia LePla, Senior Manager of Learning Partnerships, and Ruchika Gurung, Learning, Community & Partnerships Curator, to develop programming that would engage young people with both AI and the arts, framed around Tate's exhibitions. A notable example was Tate Britain's exhibition *Women in Revolt! Art and Activism in the UK 1970–1990*, curated by Linsey Young. This culminated in the event *Patterns of Power: Digital Data Response to Women in Revolt* over two days in March 2024, in collaboration with Tate Collective Producers and Linsay. The project brought together artists, data specialists, coders, researchers and creatives to explore

Patterns of Power
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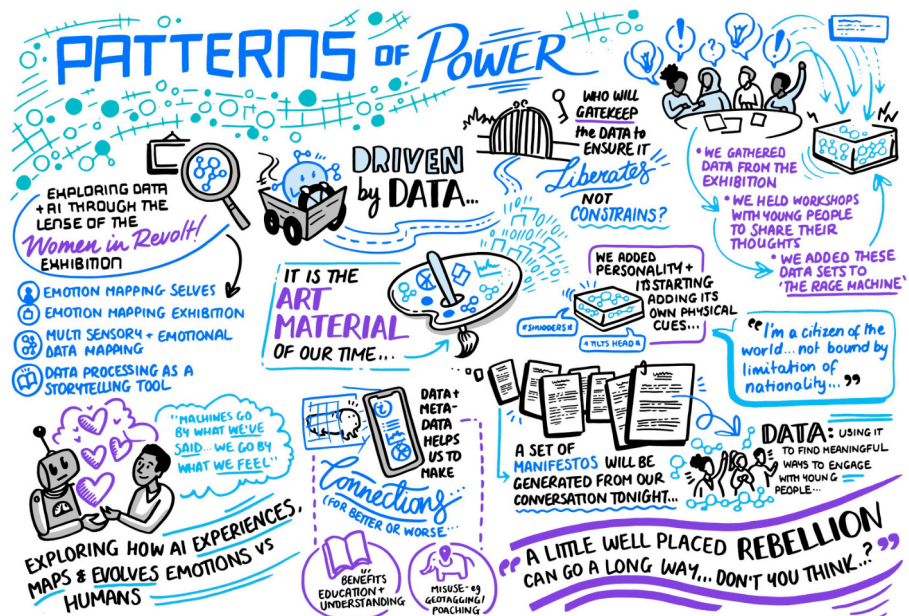
critical data mapping and storytelling through the lens of the exhibition. It included liaising with Tate's Library and also working with independent curator, Hannah Redler-Hawes and artist Julie Freeman, notable for their work in the area of art and data. A public event was held in the Digital Studio for a Late at Tate Britain in April 2024. Members of the public were able to meet with the team, experiment with the AI tools, and engage directly with a dedicated AI Agent, 'Rage Machine' that held specific data from the exhibition to allow for informed but also witty discussions about the different artworks, as well as the wider political context of the 1970s.

Building the *Rage Machine*

The Rage Machine was built using an AI Large Language Model and speech-to-text-to-speech natural language processing. The interface was engineered by Electronic Life's Tom Savage, with collaboration from artist Léllé Demertzi (who is one of the Organisers of the The Alan Turing Institute AI & Arts Group). The *Women in Revolt!* exhibition focused on feminist artists from the 1970s and 1980s, an era of intense social and political upheaval. It was one of the largest shows staged at Tate Britain, representing more than 100 artists and collectives, who produced a wide variety of mixed-media work, including photocopy, collage, performance, billboards, flyers and zines. Linsey's curatorial approach and primary research revealed the extent of the 'invisibility' and ephemerality of this period of art history, which raises critical questions about relevant data sets and collections. The importance of keeping alive an 'anger' or sense of protest surrounding gender inequalities became an important thematic anchor for *Rage Machine,* and the AI entity's name emerged in response to this.

Rage Machine
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The curator, Linsey Young, was initially skeptical about the potential for AI to contribute meaningfully to the exhibition's themes, which the *Electronic Life* team took as a productive opportunity to critique AI through making and dialogue.

Rage Machine was designed to provide real time conversations with members of the public, as well as speaking with Linsey as the curator. Its training was specifically contextualised with *Women in Revolt!* as well as Tate's wider collection, designed to draw attention back to the significance of the artworks and to keep the 'rage' of the exhibition at the forefront of any conversation. During the event itself, through a process of co-creation with the attendees, it was tweaked to understand its own position in relation to the art world - something it cannot technically 'see'.

Future Directions

The development of *Electronic Life* and *Rage Machine* has been a dynamic, interdisciplinary project that bridges the fields of AI, art, anthropology, and social practice, using technology for social and cultural good. The collaborative partnership with Tate allowed the team to test a variety of ideas in a public setting, receiving direct feedback from participants to ensure on-going research remains relevant and engaging. These interactions have been invaluable in shaping the future direction of *Electronic Life,* informing both its creative and academic framework. In 2025 *Electronic Life* is set to expand its reach with a project in India during 2025. This international work will provide new opportunities to engage with global audiences and further develop critical conversations about AI, ensuring that it is not simply a tool to be used uncritically, but a technology that can be understood, challenged, and creatively explored.

Further information:

electroniclife.ai - https://electroniclife.ai
001_rage_machine -
https://electroniclife.ai/assets/papers/001_rage_machine.pdf
Tate Britain | Tate - https://www.tate.org.uk/visit/tate-britain
Professor Sunil Manghani | University of Southampton - https://www.
southampton.ac.uk/people/5x9xt9/professor-sunil-manghani
Professor Ed D'souza | University of Southampton - https://www.
southampton.ac.uk/people/5x2phn/professor-ed-dsouza
Tom Savage | The Alan Turing Institute - https://www.turing.ac.uk/
people/former-enrichment-students/tom-savage
Linsey Young - British Art Network - https://britishartnetwork.org.uk/
membership/members/linsey-young