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VERNACULAR PEDAGOGIES FOR THE SYNTHETIC MEDIA AGE

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Introduction and background

This paper draws on our research into the cultures of production surrounding the development of deepfakes and use of other forms of generative AI across public sites such as GitHub and YouTube, and subsequent reflective classroom experimentation and learning. Expanding on the notion of ‘vernacular pedagogies’ (Albury et al., 2020) – informal and *in situ* educational and relational literacy work – we propose a set of approaches for widening participation and involvement in AI and its underlying data practices.

Over a short timeframe synthetic media has begun to reshape the internet in ways we are yet to fully understand (McCosker & Wilken, 2020). Deepfakes (and deepaudio), generative art, and the outputs of large language models (ChatGPT, GPT3) are driving talk of mass disruption to the production and status of media outputs. They raise issues of direct harms, for instance in deepfakes’ potential for non-consensual image-based abuse or political and other forms of misinformation (Winter and Salter, 2020; Öhman, 2019; Chesney and Citron, 2019), as well as through the inherent forms of bias and inequality built into the datasets on which they are trained. In many ways they are the result of decades of engagement with the internet, and the emerging everyday data cultures (Burgess et al., 2022) that we are all part of every time we upload a photo to an app, comment on a thread, or perform other ordinary modes of data-engagement with the platforms and services that fuel ‘generative’ AI models.

Meanwhile generative AI tools – and ChatGPT in particular – are causing panic among many educators and policy makers about their use in schools and universities. As a result, they are already altering assessment and learning practices. Just as media literacy and digital literacy became core areas of work for educators addressing the skills and behaviours needed to navigate the information economy, new forms of AI and

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data literacy are being imagined and explored (Long and Magerko, 2020; Laupichler et al., 2022). And there are extensive community sites and spaces exploring the limits and uses of generative AI tools through ‘prompt engineering’ (Liu and Chilton, 2022). What can formal educators learn from these sites and spaces for socializing AI? How can vernacular pedagogies be used to develop ethical learning and can critical AI and Data literacy keep pace with technical developments?

Research design

Code and no-code materials for creating Deepfakes have been widely available for use and experimentation since their creation and release in 2017 by subreddit /r/deepfakes – and subsequently banned due to its misuse in non-consensual porn. Similarly, experimentation and application of GPT3 and ChatGPT, Midjourney and other generative tools are themselves important spaces for public pedagogy and discovery – as well as highlighting forms of misuse and potential harms. In other words, the negotiations and contested uses to which these tools are being put, we argue, serve as an important research field site.

To examine the production practices and cultures for developing deepfake videos, we studied popular GitHub repositories and YouTube how-to and developer channels. These, along with popular subreddits, discord communities and other sites of exchange and negotiation serve as their own domains of vernacular pedagogy around the production and socialisation of AI. Connecting students to these forms of experimentation and social learning can be valuable. We see them as spaces for intervention and learning in ways that can be brought into formal education.

In this paper we reflect on the kinds of public vernacular pedagogy available on YouTube, GitHub and elsewhere online, and the kinds of experimental project work and learning environments that can be created with higher education students that can expand critical forms of AI participation and literacy.

Findings and Analysis

Examining various sites of public learning and engagement with synthetic media and generative AI, we see great potential in bridging the informal or vernacular pedagogies with formal educational practice. Doing so brings together new users of complex systems in spaces of active exploration, often opening the hood on AI tools and the datasets that underpin them as well as teaching new skillsets for evolving creative work practice.

Sites like GitHub, YouTube, Discord and others that share code, data, instructions and outputs can foster social learning and learning by experimentation. README files on GitHub offer resources for understanding generative models and exploring datasets used for training. These are not only educational resources for personal learning or formal educational settings, but they also help to negotiate the uses to which the tools are imagined and deployed. For example, the deepfakes/faceswap repository contains an extensive README ‘manifesto’ that establishes guides and resources for understanding and running the code for ‘people interested in generative models.’ It

takes an inclusive stance, opening access to AI techniques beyond specialists, as ‘the first AI code that anyone could download, run and learn by experimentation.’ Like other popular code repositories on GitHub, faceswap enables experimentation and engagement with AI techniques and practices and has built a community of practice around the tools it makes available.

The accessibility of YouTube tutorials has also allowed deepfake memes to spread via how-to videos like face swap memes created with the song “Baka Mitai Dame Da Ne” (see, for example, YouTube video: “How to Make the Baka Mitai Dame Da Ne Meme [Complete Tutorial with Templates],” Kapwing App, 4 August 2020). These tutorials, go some way toward building awareness about visual data and skills through frame-by-frame preparation and manipulation.

Similarly, the discord community surrounding the use of Midjourney, builds vernacular knowledges and explores forms of ‘prompt engineering’ that include folk knowledge and command line expressions. This combination and the generative results, exposes ordinary users to considerations of the ethics and practices around creating synthetic images.

While these sites offer techniques and materials for vernacular pedagogies of AI tool use, we also consider how they can be integrated into more formal classroom settings via ‘generative curatorial practice.’ Our classroom work reflects on creating a series of workshop experiments to generate a student-led synthetic gallery of sculptures as a set of ‘childhood memories’ and attempts to functionalise AI prompts by reverse-engineering and critiquing the ‘prompt markets’ that emerged in 2022.

Specifically, teaching practice to ‘discover’ specific styles of sculpture (e.g., Piccinini, Rodin) familiarises learners with the tool; explores how the AI practice ‘sees’ the world (i.e. folk knowledge, bias); and examines the subjectivity of curatorial taste. The generative value creation of AI is tested through the curatorial manufacture of images triggering childhood memories via prompt engineering and sharing the effects with the class. Finally, we consider how to build in reflection on the AI economy itself, deconstructing how markets like ‘promptbase’ work – and whom they might not work for as AI leverages datapoints on extant art. This enables dialogue around the hot takes being put into media (e.g., incompatibility with IP regimes) that seem at odds with the vernacular pedagogies and social practices we have encountered.

Conclusion

While we are at the early stages of developing new methods for building critical AI and data literacies and competencies across educational settings, there is much to learn from the spaces of vernacular pedagogy and its integration to formal settings.

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