

Practices of Prediction: Tarot as a lens for disrupting ML eventfulness

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Abstract

This paper explores how artists can engage Tarot as a lens for engaging and disrupting faith in machine learning capabilities. Considering the increased casual adoption of ML systems, especially as embedded into social media platforms like Discord and TikTok, it explores how prediction as a form of knowledge production is engaged and naturalised via interaction. Tarot reading, as another form of knowledge production, was selected due to its productive similarities and differences, which are used by the artist to unearth and examine faith in prediction. This is achieved via the creation and discussion of the creative project, “Practices of Prediction” (2023), an interactive installation in which audience members are encouraged to reach out into the unknown, turning to the ML system for guidance and advice, receiving in return a new generated Tarot card and reading. The paper explores three practice-based avenues for revealing and disrupting faith in prediction: manipulating prompt weighting, exploring the dynamics of ‘flipping and seeking’, and contrasting the concealment and revelation of predictive processes. The final section of the paper offers reflective insights on the implications of using Tarot as a creative lens, both for the artist and the audience. In this, it calls to the forefront what it means to collectively generate visions of the future with ML systems.

Keywords

Machine Learning, Interactive Installation, Tarot Reading, Predictive algorithms, Prediction, Practice-based research.

Introduction

Supported by recent advancements within the field of machine learning (ML) research, we have seen an increase in technical, creative, and casual adoptions of predictive algorithms as a method of knowledge production. [1,2,3,4] Emerging within different spaces in culture, we see investment in predictive ML technologies within projects such as online courses to learn how to unleash “GPT-3’s Potential for Productivity”, and TikTok trends to use ML filters to predict the future of your relationship. [5, 6] Alongside these emerging projects are theorists and artists who argue that ML models rely on and are experienced within a technoculture that produces faith in prediction. [7, 8, 9] Furthermore, the knowledge and material generated by these models are further complicated when the histories, methods, and architectures that underpin them are considered. [10, 11]

Practices of Prediction (2023) is a practice-based research project in which I use Tarot reading as a lens for generating insights about predictive forms of knowledge and belief production generated under technocultures engendered by machine learning. As a method of predicting the future with a different social and cultural history, Tarot was selected due to its productive similarities and differences to ML practices. Some similarities and differences analysed include protocological, technical, conceptual, and social. By engaging these productive similarities and differences through practice-based research, this project and resulting paper explores how artists can mobilise Tarot to disruptively view and uncover our contemporary faith in predictive technologies.

Faith in prediction

The exploration of this creative practice is founded upon the assertion that there is already faith in algorithmic prediction which has been analysed by Critical AI (Artificial Intelligence) and algorithmic studies. [12, 13, 14, 15] Of particular importance to this project are firstly, that algorithmic culture is built on the belief in a computational universe where all things can be approximated or mapped by functions. [15, 16, 17] Secondly, that faith in prediction allows us to read into algorithms capabilities outside of their current capacities. [18, 19, 20] Finally, that the outsourcing of knowledge production to algorithms, perceived as being supernaturally accurate, is a product of such faith. [21, 22] This outsourcing relies on the claim that objective, rational and universal knowledge is possible via computation. However, many artistic and theoretical projects problematize this notion, highlighting how human bias and decision making are part of ML systems. [23, 24]

Unlike Tarot reading as a practice of cartomancy, many ML projects, e.g., Midjourney, Chat-GPT, aren’t perceived as making active claims on the future. Rather, many of these projects are seen as tools or systems for a specific problem or use-case. [25, 26] For example, Dalle-2 is designed to, “create original, realistic images and art from a text description. It can combine concepts, attributes, and styles.” [27] However, what I am exploring in this project is how faith in prediction manifests in response to these technologies, and what claims about algorithmic knowledge creation this naturalises. In August 2022, TikTok released their AI Greenscreen filter which allows users to put in a prompt and receive an AI generated image which has over 16.5 million recorded videos. [28] The generated images are much more

abstract, or less clearly indexically related to the prompt, than images associated with generators like Midjourney, Stable Diffusion and Dalle-2. The only guided instruction from the filter is “Enter a few words” and the button provided to hit ‘create’. However, within this filter a series of trends to predict the future or reveal secret and supernatural knowledge emerged. Some of these trends include, asking about a past life, entering a birthdate to see how the user will die, and taking a photo of a user’s hand to see if a marriage will happen. [29]

However, this does not necessarily suggest that using these filters indicates that users believe in AI as a literal oracle or future-teller. Rather users engage automated prediction as a divinatory tool or even a game to speculate about their futures drawing upon historical and cultural practices of future reading. These trends and games have become caught up, visually and conceptually with ML as a form of knowledge production via prediction. This can be better understood through Karen Gregory’s mediation on the role of Tarot cards and prediction. [30] Gregory discusses the “synthesis of divinatory capacity and play” which is embodied by the ‘flip’ of the Tarot card, revealing how prediction as a form of knowledge production can be exciting and eventful. Tarot future making allows us to ask questions about uncertainty in a way we can handle and manipulate.

To simplify Tarot as a protocol, we can reduce it to these steps which are labelled as clear or obscured: asking a question (clear), shuffling of the deck (obscured), drawing of the card (obscured), revealing of the card (clear), creation of the reading (mixed). Turning to the AI Greenscreen TikTok filter as a protocol, we can also reduce it to similar steps: asking a question/taking a video (clear), engagement with ML processes (obscured), generation of the image (obscured), revealing of the image (clear), creation of the reading (mixed). Each protocol then engages the known and unknown in the creation of the prediction. For Tarot, the shuffling of the deck and selection of the card engages the unknown in various ways depending on the user’s perception. Some users believe that the deck is a spiritual object which connects them to higher or divine knowledge source. Whereas others only engage the deck as a useful tool of randomness.

For ML, the engagement of the ML system and generation of the image also engages the unknown in various ways depending on the user’s perception. Some users with little experience may have no understanding of how the algorithmic system generates an image. Whereas more experienced or technical users may have varying levels of understanding of how the image is being produced. Nonetheless, some form of engaging with the unknown is engendered via the architectures of deep learning ML systems. [31] Firstly, some core parts engaged by ML models may be intentionally obscured or not acknowledged. For example, TikTok’s AI Greenscreen filter has over 16.5 million videos created using the filter but provides no description of the model, how it was created or even its intended use. [32] While other projects are more open about the operations, many ML models are proprietary, and as such much of the detail about the

architectures, techniques, datasets, and training methods used is intentionally obscured. [33, 34] Due to this, while users can speculate how the system works to a certain extent, there is still an intentional lack of certainty. Secondly, the nature of deep learning algorithms currently results in uninterpretable systems in which we are unable to examine the logic or reasoning for the produced output. [35] As such, engaging with uncertainty or unknown logic is inherent to our current interactions with deep learning predictive algorithms. This is to argue that ML TikTok filters, too, engage a ‘flip’ via their interaction with obscured ML algorithms that surprise with the click of a button. This allows users to speculate and reflect about the future in a way that takes place within a controlled interaction. As algorithms continue to expand throughout culture and life however, what claims and practices do these processes of even playful knowledge and belief production naturalise? Furthermore, through my engagement of Tarot in the interactional and visual space of divinatory ML, I want to ask: how can artists engage and disrupt where this knowledge and belief production manifests?

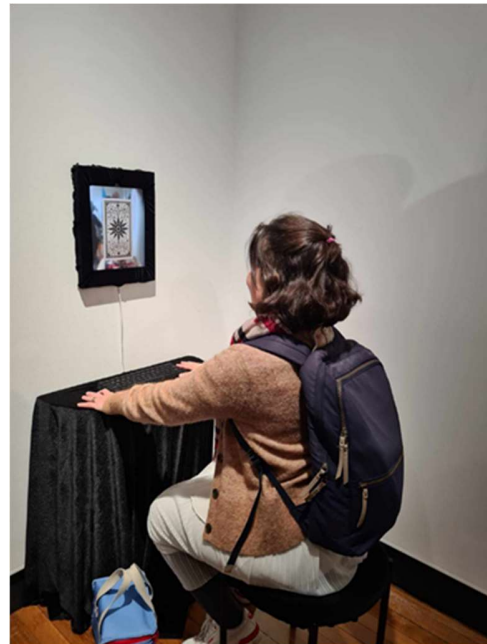


Figure 1. Audience member engaging the installation experience.

The Installation

Practices of Prediction (2023) is an interactive Tarot reading experience mediated by multiple ML applications. In this work, users are encouraged to reach out into the unknown, turning to the ML system for guidance and advice and receiving in turn a new generated Tarot card and reading. Reminiscent of Tarot or occult practices, this artwork positions engaging with ML as a process of reaching out to unexplainable forces for predictive guidance or knowledge

which has been transformed from mystical to rational via algorithmic engagement.

Within the gallery space, audience members find a mirror (screen), a stool and velvet table with an embedded keyboard. Upon sitting down, the screen explains to the user that it is an AI fortune teller who can provide guidance about the future. The user is then encouraged to ask a question and is supplied with a newly generated Tarot card image and respective reading.

The generated Tarot cards: categorisation and knowledge generation

In this project, I generate productive connections and disconnections between Tarot and ML as a method of uncovering new insights about faith in prediction. Some topics of mutual concern are categorisation, combination, and interpretation. Originally invented as a card game (15th century), then adopted as an occult method of cartomancy (18th century), contemporary Tarot reading is understood as a method of divination through spiritual, or self-reflective means via the shuffling and interpretation of the deck. [36] While only consisting of 78 cards, the standard Tarot deck contains a structured system of elements which are considered infinitely combinational, and thus capable of fully representing, and revealing insights about human experience. [37]

In her discussion of Tarot cards, Karen Gregory engages Steven Connor's mediation on the flatness of cards as a method for generating and organising knowledge. [38] For Connor, "Cards are the visible sign of communication between an unordered and ordered world, a world of mingled and overlapping hybrids, a world sorted into categories." [39] By reducing an unordered world into ordered cards, Connor argues that we are bound to flatness when attempting to formalise experience. Flatness, here, refers to cards as an organisational method of sensemaking, in which separated concepts are brought together to create schematic arrangements of the world through processes of approximation, reduction and abstraction. However, as a system of sensemaking, cards not only act as schematic arrangements of the world, but as epistemological statements or objects which can then come to act and affect in the world. The clean edges or cuts between cards is emblematic of how this ordered flatness comes into effect. For example, if the Fool Tarot Card is drawn – under the protocol, and the epistemological statement of Tarot – the onus is on the reader to fit and arrange the querent's lived experience or question to the confines and logics of the drawn card.

Turning to ML, we can also view predictive algorithms that rely on datasets as epistemological projects which become active through the creation of a fixed arrangement of the world via processes of approximation and categorisation. Kate Crawford and Trevor Paglen argue that while AI projects are often positioned as objectively or rationally classifying the world, the act of classification will always be a relational, political, and subjective task. [40] As such, they discuss how classification as a core practice in the creation of visual ML systems, relies on a series of unstable epistemological assumptions about the nature of images. Firstly,

that concepts are fixed and exist within some sort of universal consistency and secondly that there is a fixed and universal connection between images and concepts which can be unbiasedly or objectively discerned by a viewer. Under this epistemological statement, any issues of bias, inaccuracies or problematic tendencies that are generated by a ML system are symptomatic of poor categorisation, and therefore, through time and effort, a perfect representation of the world is possible. However, Crawford and Paglen argue that there is no technical fix for bias, and that the act of creating a categorised dataset is inherently a political act of power. The risk we then face, like with Tarot, is shifting our lived experience, questions, or ideas to accommodate the epistemological statements of ML systems to receive the perceived benefits of predictive algorithms.

If both Tarot and classification used in ML engage fixed representations of the world and formalise these into structured elements to generate knowledge – how do processes of scale and interpretation disconnect the relations between these two practices of prediction? In Tarot reading, new information is created by the user's reception of the order and combination of cards within the confines of a 78-card deck. [41] For example, if the Tower card was drawn and then the Sun card, one way of reading this as a future outcome would be: a time of deconstruction followed by one of peace and happiness. In this sense, the reading fills in the gaps between cards to create a predictive system which can encapsulate the world/human experience. Whereas ML generates new information via interpolations and generalisations of patterns in the dataset often with millions of data points, which are then produced for human implementation. Through functions ML models try to optimise a low error predictive relationship between input and output [42]. In other words, through the mapping of patterns or creation of useful approximations, ML algorithms can 'fill in the gaps' between inputs, or interpretable concepts.

In the creation of the Tarot cards for the exhibition, I used the Tarot deck as one fixed system for representing the world, as the parameters of prompts for engaging Midjourney as another fixed system for representing the world. Through this, the respective modes of categorisation and interpretation present in the protocols of these systems of prediction are engaged. Parameters in ML are variables the system learns to make predictions or narrow in upon the desired result. [43] By using the 78 cards of a standard Tarot deck as weights or parameters, I can then 'fill in the gaps' between cards, outsourcing the creation of a predictive relationship between cards to ML. By increasing the weight or influence of each card as a parameter in the prompt, I can explore how the predictive relationships between cards can be represented visually. For example, instead of myself drawing two cards and creating a prediction and interpretation via their combination, the ML system creates a new card via prediction, representing the relationship between these two cards, which mediates my interpretation.

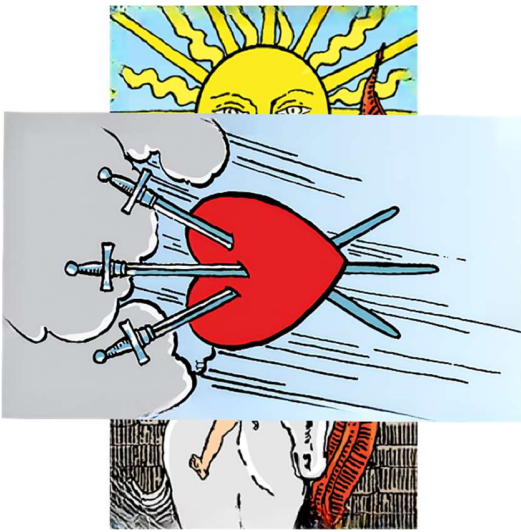


Figure 2. The Three of Swords Tarot Card layered on top of The Child Tarot Card. Figure 3. Midjourney image equally weighted between the Three of Swords Tarot Card and The Child Tarot Card.

In the installation experience, when an audience member asked the system a question, this was then sorted into semantic and emotional keywords by GPT-3.5. [44] These keywords were then matched with the respective readings and meanings of the standard Tarot card deck which were being used as the parameters for generating the images of new Tarot cards. When matched, the card gains greater influence within the prompt which biases the generated imagery of the Tarot card. For example, if the question was “how will I die?” the related keywords generated by GPT 3.5 may include, “death, anxiety, uncertainty, time” which trigger a match with the Tower card, the Death card and the Nine of Swords card which will all receive a +1 weighting within the prompt. The resulting image would then be analysed using Astica’s Computer Vision API and the generated description of the image would then be sent to GPT-3.5. [45] GPT-3.5 would then take the user’s question as well as the description of the card, to generate a new Tarot card, and provide a reading. The description allowed GPT-3.5 to make direct references to the features of the card.

For example: Question: How will I die? Card description: A drawing of a dragon with a red cape and a sword (figure 4 was analysed to create this description). GPT-3.5’s reading: “Card: The Dragon of Sacred Valor. Reading: The Dragon of Sacred Valor stands as a sentinel in the great expanse of life’s mysteries. Dragons, in many cultures, are symbols of ancient wisdom, power, and transformation. The red cape draping its form suggests a life lived with passion and a spirit protected by an inner fire. The sword it wields is reminiscent of the Suit of Swords in Tarot, symbolizing the power of intellect, clarity of thought, and decisive action. In response to your profound question, “How will I die?” – this card suggests not a literal answer but a metaphorical one.

Your life’s culmination might be marked by a transformative event or a significant change that requires immense bravery and clear-minded decision-making. This card is not foretelling a physical end but indicates a shift or transformation, possibly in your beliefs, attitudes, or circumstances. The advice from The Dragon of Sacred Valor is to approach life with wisdom and valor, ensuring you handle challenges with both heart (as represented by the red cape) and mind (symbolized by the sword). Your journey’s culmination, whenever and however it might be, will be a testament to a life lived with honor, passion, and wisdom.” [46]



Figure 4. Generated image of a Tarot Card created using Midjourney.

Protocols of eventfulness: the flipping and reading

Tarot reading exists as various practices and protocols within culture, but can be reduced simply to the shuffling, flipping, and interpreting of cards in a sequence to answer or explore a user's question or concern. [47] For example, the common Tarot reading format, the Celtic Cross Card Spread instructs the following sequence: the asker formulates a question or concern which is shared with the reader, the reader and asker each shuffle the deck three times, then cards are drawn randomly from the deck and placed in specific correlating spaces on the table. [48] The order and appearance of the cards drawn are significant, for example the second card drawn refers to the obstacles the asker faces, and the third drawn card refers to what the asker is working or moving towards. What I am interested in here is how these protocols or steps generate feelings of eventfulness, trust, or legitimacy within the resulting prediction.

In her discussion of Tarot, Karen Gregory, discusses how knowing or not knowing how the cards 'work' does not challenge the legitimacy of the practice as long as the flipping of the cards creates a feeling of eventfulness. [49] She argues that Tarot creates feelings of trust and faith, as whether the user feels like the card is accurate or chosen by fate, through the act of flipping over the cards, they nonetheless always reveal new information or space for interpretation and reflection that was not present before the flip. Forging connections to ML, Alexander Campolo and Kate Crawford also discuss how knowing or not knowing how the system works doesn't challenge the legitimacy of the practice so long as the knowledge generated is seen as impressive. [50] They introduce the concept of enchanted determinism, which encapsulates a perception of ML as both having supernaturally predictive capabilities, while also being unable to explain how these results are produced. Both systems then engage unexplained processes to generate new knowledge. However, what is not clear is whether ML generation as a form of prediction, creates feelings of eventfulness akin to the flipping of Tarot cards. Campolo and Crawford argue that the impressiveness of results validates the use of unexplained ML systems. In this project, I am exploring how eventfulness informs the impressiveness of prediction. Furthermore, if eventfulness as resulting from the performance of protocol cultivates faith and trust, how is this manifesting in our engagement with ML systems?

Many of the user facing interactions with contemporary ML systems, like ChatGPT and Midjourney engage low amounts of eventfulness. If the goal is to generate an image of a dog – the eventfulness is contained to whether a dog was generated, and how well this generated dog fit the user's expectation. The actual 'flip' of these interactions – when ChatGPT's sentence begins or when Midjourney's images come into focus – results in low amounts of eventfulness. However, as explored in the TikTok AI Greenscreen filter above, larger amounts of eventfulness can be cultivated via the expectation or framing of the predictive experience.

Within Tarot reading as a practice, there are certain steps, or common methods within the protocol which, I argue,

engage, or generate higher amounts of eventfulness. For example, often there are processes such as shuffling the deck three times, taking deep breaths, or focusing your attention, energy, or the nature of your question into the cards. [51] These all draw attention to the deck as an unexplained system which can generate new knowledge and cultivates anticipation for the 'flip'. When engaging with ML, buttons we click, loading bars, and images coming into focus, can all be understood as moments of eventfulness, or the space of expectation of incoming new knowledge mediated by unexplained systems. But unlike Tarot, where this cultivation of eventfulness is upfront, explicit, and central to projects of cartomancy as a method to reveal insights about the future - ML eventfulness often resides in the background. While generating a new image of a dog doesn't cultivate the same eventfulness as Tarot as a process of predicting the future, I am exploring how these increasingly ubiquitous forms of minor eventfulness generate trust in ML as a form of predictive knowledge production.



Figure 5. Close up of installation with generated Tarot Card.

Within the work, these concerns were engaged via the application of Tarot eventfulness procedures to ML. After asking their question, the user was encouraged to place their hands on the keyboard, focus their energy into the card and to take deep breaths. These eventfulness protocols were used to further frame the interaction as cultivating insights about the future in the generation of the Tarot card images.



Figure 6. Midjourney generated Tarot cards output at different percentages (e.g., at 5%, 30%, 50%, 75%, 100%).

In this, I was interested in engaging the diffusion architecture of Midjourney, where the image is found or reconstructed within noise over time, appearing in front of the user incrementally (e.g. at 5%, 30%, 70% as pictured in Figure 6). [52] When the prompt was sent to Midjourney, a script would save out the images generated incrementally and then blend between the images creating a seamless animation of the card coming into focus. While this process of images coming into focus is naturalised within Discord as the hosting platform for Midjourney – when brought into the context of the Tarot reader installation, this process of generating becomes visually alike to occult practices like reading crystal balls or tea leaves. [53] Unlike in the flip of the Tarot card reading protocol, in the installation, the diffusion architecture of the ML system is visualised, bringing our future towards us in real time.

Eventfulness protocols inherently require some form of obscurity or engagement with the unknown. For example, picking a Tarot card from an array of face-up cards does not create the same eventfulness as the flip of the card. I argue that ML systems generate eventfulness via engaging the unknown in two ways. Firstly, ML architectures inherently are obscured or engage the unknown via the training process. The ‘black box’ nature of these systems is well discussed, as currently, we are unable to examine the logic or reasoning for the produced output. [54] Secondly, understanding even the basics or the concept of ML systems is no longer a necessary requirement for actively engaging and generating with a ML system. [55] As discussed, many user-friendly ML applications have been released and adopted within recent years with interfaces which don’t directly require an in-depth knowledge of the system, or the field of ML itself. This element of the unknown, or obfuscation which is present in encounters with ML systems, is key to eventfulness, and I argue, contributes to an intensification of faith in prediction. Within study of the effects of technology, it is outlined by Alfred Gell that the hiding of labour, or the obfuscation of process contributes to a magical perception of technology. [56] This is further explored by Betti

Marenko in their examination of historical androids to engage the power of dematerialisation in contemporary digital technologies. In this they argue that the hiding of physical components as well as the obfuscation of the labour that technology requires, creates a spellbinding and magical experience. [57] Furthermore, many recent technical ML projects directly engage this magical perception as a central feature. AI video and image generation platform Runway, brands its suite of ML systems as “AI magic tools” and design platform Canva, recently released a new suite titled, “Magic Studio” which hosts a series of AI design tools. [58, 59] M. C. Elish & danah boyd outline how this “like magic” rhetoric is common within the advertising of AI products and works to express the amazing experience of technology in which the means of achieving the experience is irrelevant. [60] In many casual ML interactions, only the prompt, the generated output, and potentially a disclaimer or space to provide feedback are visible – with the means and processes necessary to achieve the output being invisible. For artists then, what parts of the ML generation process are hidden or exposed, becomes an entry point or exploratory grounds for engaging or disrupting magical thinking.

Within the installation, multiple ML systems were engaged in the reading process. These different API endpoints were concealed in the creation of a seamless reading experience which, I observed as generating a magical perception of the installation. However, in the generation of strange cards, and the limitations of machine vision (e.g., providing weak, or incorrect descriptions of the card) there were moments of disruption and intrigue for audiences. In the appearance of misshapen attempts at letters, melty imagery, and strange anatomy, and in weak, or nonsensical readings which don’t ring true to the card generated – there is a whisper or a breakdown of magic. Despite the efforts of the installation to appear seamless, to hide efforts and to create an experience of personalisation – in this breakdown of generation, perhaps there is an opportunity for audience members to question the card they have been dealt. To question what

it means not just to predict one's future or to flip a card, but to craft a reading of it with care.

Crafting collective futures with ML

Throughout the exhibition, the prompt acted as a growing representation of what we, as an audience were collectively searching for. Rather than resetting between each user, the prompt which is weighted by the keywords taken from the question asked and then generated by GPT-3.5 continued to grow and be biased over time. For example, if audience members continually asked about money or fortune, the imagery of the 9 of pentacles (orbs, stars, and trees) card may begin to bias the generated imagery of the future cards. Through this, I attempted to engage current tensions in the field of ML applications in a way that audiences could perceive.



Figure 7. Midjourney generated Tarot card with high 9 of Pentacles influence.

Firstly, that ML applications are inherently biased, often in ways that casual users cannot easily detect and interpret. As described by Louise Amoore, ML systems come to act meaningfully within world through their biases. ML systems which can generate images are inherently reliant upon the initial training dataset. [61] As discussed above, while working at a much larger scale than the Tarot deck, ML systems too are limited using a closed training dataset. However, the closedness, scales and biases of the Tarot deck are more visible to a casual user than within ML systems. If the Fool card is drawn, there is a general awareness of the limit of other possibilities which may have been drawn instead. Whereas in ML, the generated output isn't always accompanied by easy access to or understanding of the training dataset. In some cases, the dataset or the limitations and boundaries of the ML system are intentionally hidden. For example, the

headline of the Midjourney Discord server reads (as of October 2023), "The official server for Midjourney, a text-to-image AI where your imagination is the only limit." [62]

However, despite this tagline, many casual users and researchers have discussed limitations currently inherent to Midjourney as a ML image generator. [63, 64, 65] From various issues of bias pertaining to race, gender, sexuality, ethnicity and more, to the accuracy issues the system faces when generating hands and text and to the inherent limitations of a system reliant upon a closed dataset, there are boundaries and limitations within this system of generation via prediction. However, in the tagline, these limitations are shifted from the system to the user. In this way, biased imagery, uncanny hands, and repetitive motifs become the result of a user's imagination. Some practices of Tarot reading have a similar shift in ownership, where the user's 'energy' is seen as responsible for or as influencing what cards are drawn. [66] In this, we can frame both systems of prediction as placing emphasis on the user as having ownerships not over the creation of the deck or dataset, but rather over their generative actions (energy, shuffling, prompting, selecting) which informs an output via the engagement with system. Rather than questioning the system through which insights are generated, the onus becomes on honing one's ability to 'tune into' or master the system. This is not to say that skill, experience, or intention don't influence the generation of outputs, but rather to highlight how limitations inherent to the system are shifted to limitations of the user. Applying this to Ed Finn's and Tartelon Gillespie's respective discussions of how algorithms are increasingly dominating visions of the future – how are we being encouraged to shift and change in response to algorithms, rather than to question algorithms in the generation of these visions? [67, 68]

Secondly, the ways in which we generate information via predictive systems are inherently collective and distributed. For example, within practices of Tarot reading, there are multiple elements at play which inform the reading, some including: the deck, the reader, the user, and the reading practice. Each of the elements involved in the reading influence the prediction generated to varying degrees. Single cards alone have had vastly different interpretations by different readers, and practices throughout history. [69] In this, it becomes difficult to pinpoint 'who' is responsible for the reading – which I argue, contributes to feelings of eventfulness. The combination of multiple influencing factors into an interpretable outcome which can be taken at face value, or tracked, traced, and connected to each source is a highly individual yet relational practice engendered by Tarot. Predictive ML systems share this sense of distributed authorship or ownership at a vastly larger scale. As discussed by Louise Amoore, we are all implicated in the training, distribution, and adoption of ML systems. [70] It is troubling and perhaps paralysing to think that the ways in which we willingly and unwillingly encounter and engage with predictive algorithms have tangible collective effects. What I click on, may influence what you are shown. Via processes of surveillance and categorisation our actions are consistently being used to enable predictive algorithms which have

collective effects. Furthermore, prediction inherently relies upon the past, or the dataset, to create functions which impact the future. We are then urged at the risk of limiting our notions of what the future could be, by algorithmic variations, approximations, and optimisations of the past. [71] The continuous prompt weighting used within the installation, then is a way of exploring these tangents, and what it means to be making predictions collectively, individually and mediated by ML systems. As our shared pasts of readings continue to haunt future readings, the work explores how background and unknown factors at play within algorithmic prediction which we are implicated in, increasingly are defining what visions for the future we can generate.

Reflections on Tarot and disruption.

In this paper, I have outlined how as an artist, Tarot becomes a useful lens or method of engaging and disrupting ML applications through practice. However, how Tarot was applied to ML in this gallery setting had varying levels of success for engaging and disrupting predictive algorithms for audiences. On one end, some conversations I witnessed reflected on what it means to predict the future, and interest in the various processes at play. However, the work also generated a lot of excitement and amusement over an "AI Tarot reader" sparking an awe or playful faith in the installation's predictive capacities.

As discussed in this paper, encounters with predictive ML systems generates varying levels of eventfulness akin to Tarot reading. In the reflection upon the body of practice, *Practices of Prediction* (2023), I have outlined how artists can engage prediction via eventfulness. The concept and execution of an 'AI Tarot reading' experience was designed to call to the forefront of audience's minds what it means to make a prediction about the future, and how we are increasingly knowingly and unknowingly making these predictions with ML systems. Furthermore, the following tactics were used within the work and reflected upon in the paper. Firstly, applying a closed dataset (the Tarot deck) as prompt weights for engaging a ML system reliant upon a closed dataset. Secondly, exploring hidden and visible eventfulness protocols as a method of sensitising users to ML systems as engaging the unknown in the knowledge generation process. Thirdly, engaging continuous prompts as method for surfacing the collective nature of prediction we enact when using ML systems.

The goal of this was to highlight the similarities between Tarot reading and ML practices for audiences to disrupt or engage faith in prediction. To draw tangible lines for audiences connecting how ML and Tarot both, as closed datasets interpreted and operated by humans, allow us to make claims or generate knowledge about an open future. For the disenchanting, calculable, and rational worldview, ML both as a field and as a commercial brand is founded upon – this comparison or connection should be unsettling. Generalising, we can assume that many people who identify as rationalists, or technological innovators would scoff, or look down upon Tarot reading as a method of prediction. Despite these connections drawn, ML is shielded by the discourse and

experience of enchanted determinism, in which we are able to cognitively accept the unexplained nature of systems to experience the benefits of prediction. [72] Perhaps this is why rather than disrupting faith in prediction, the installation seemingly allured audience members with the promise of an AI fortune teller. In this, the naturalised way we engage with prediction casually, and the allure of ML prediction was engaged and evidenced.

Returning to Karen Gregory, the desire to 'flip' or to generate 'something' where nothing once was, is extremely compelling. [73] For, whether we agree with the prediction or not, 'something' has occurred which nonetheless generates new knowledge as well as the *feeling* of generating new knowledge. This inherent appeal of eventfulness combined with enchanted determinism reveals the seduction of ML, a 'rational magic' in which something is generated via unexplained forces which is made powerful when framed by our faith in prediction. [74]

At the crux of the work is then a question: is the future, or the card, that has been crafted or sought for the audience in the interaction, made more eventful, or trustworthy, due to the knowledge that it has been generated or intervened with by ML systems? Or in other words, is eventfulness made more powerful via algorithmic awe, or an inherent belief in the promise of superhuman calculation at the heart of ML prediction? If so, how as artists, can we productively intervene within the eventfulness of ML prediction?

These protocols are continuously and ubiquitously staking claim on our shared and individual futures through processes of prediction. [75] As such, while we continue to critique and reveal how predictive algorithms come to act and effect on large, societal scales, so too must we examine and unearth where eventfulness enroots faith in prediction into our hearts and minds via minor, playful, useful, and naturalised interactions.

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