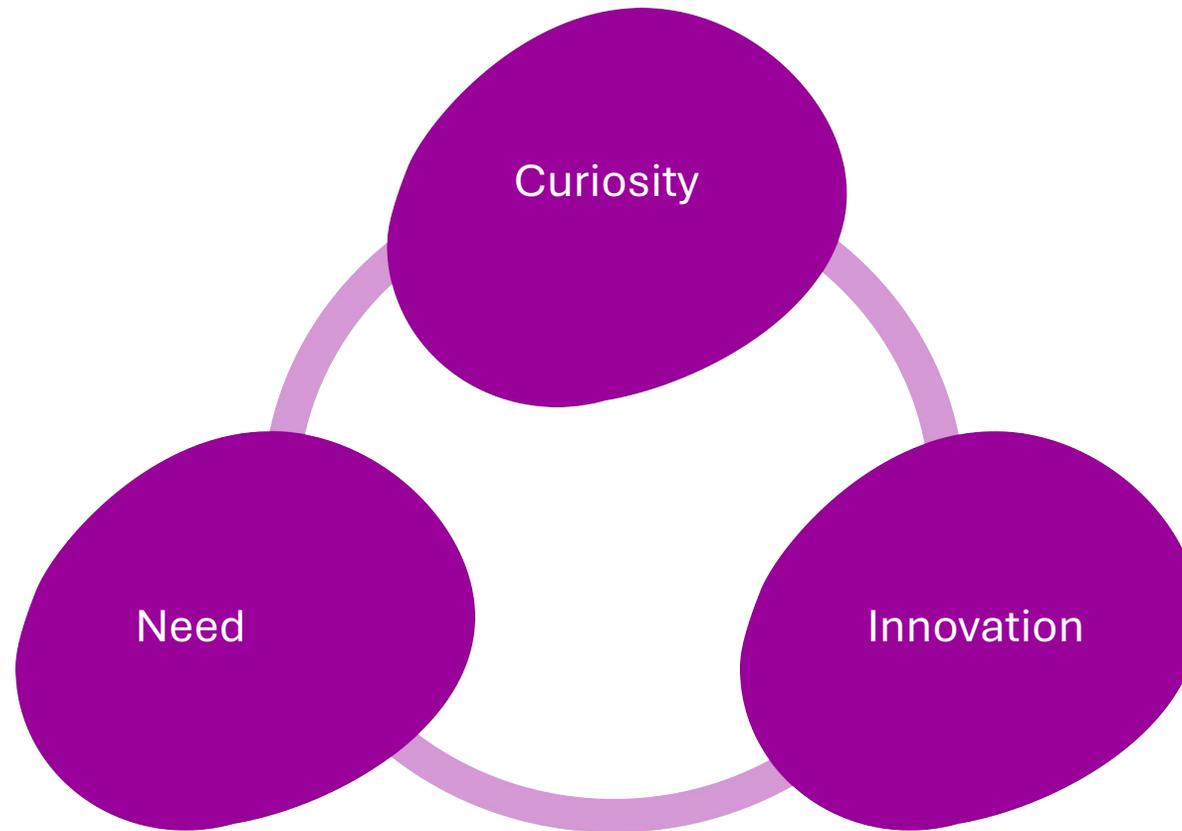


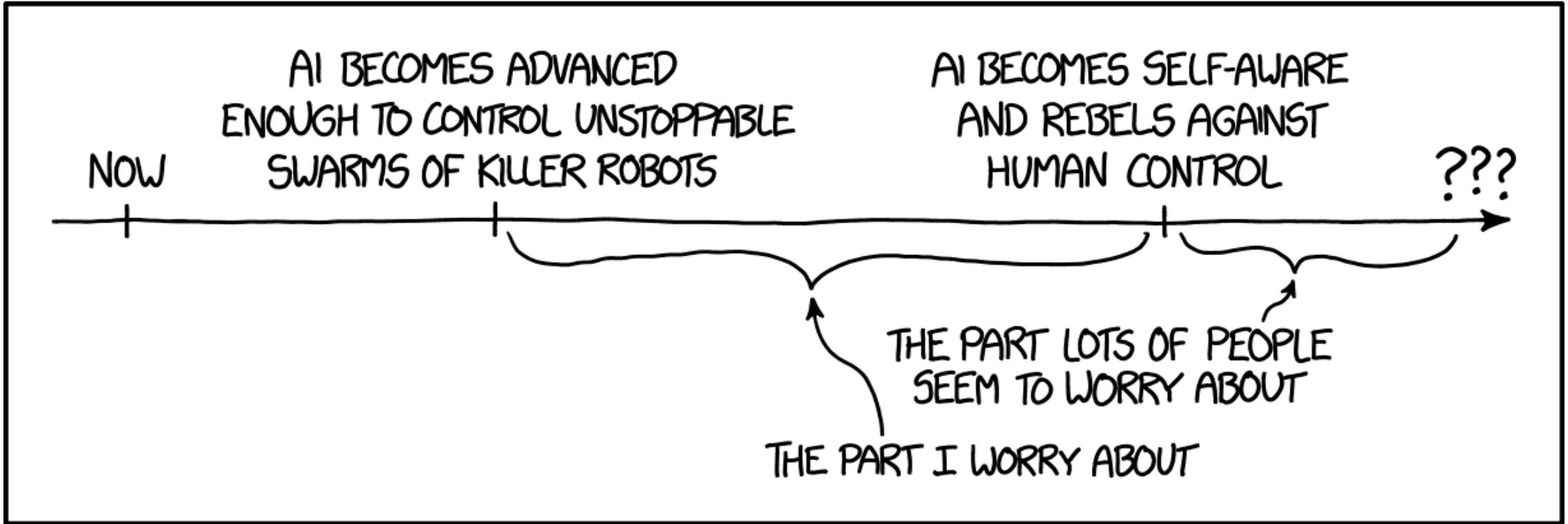
Practical Use of AI in Harm Reduction and Therapeutic Practice

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Why AI - the Betknowmore UK Case





Common Myths About AI

We started by considering what the organisation did and didn't know about AI. The discussions threw up that there were some common errors people were making in their thinking about AI - some of which contradicted each other!

AI is going to destroy humanity.

AI is just hype and won't change anything.

AI is going to destroy everyone's job.

AI is only for big companies.

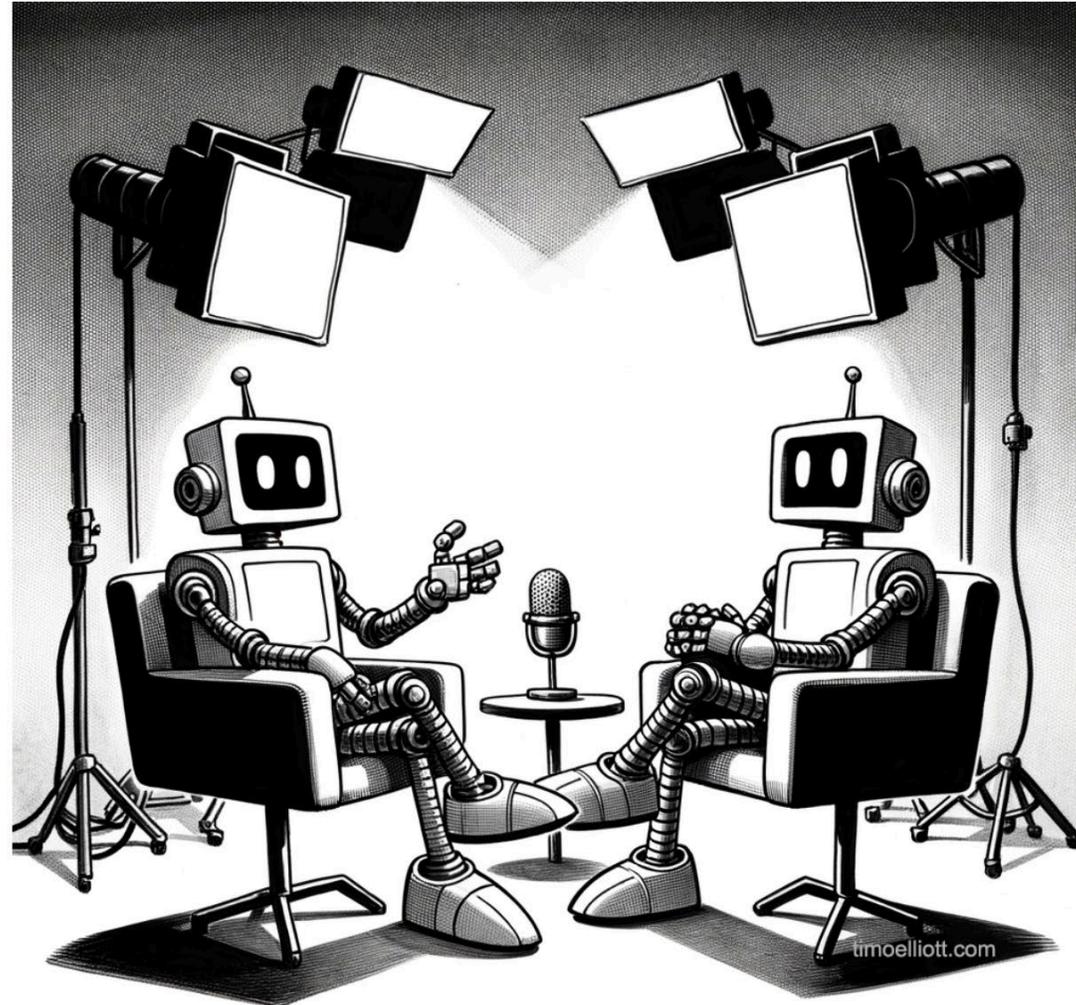
AI is inherently unethical.

Ethics and Regulation

But – one last thing needs to be considered before looking at the reality and practical questions around the use of AI in therapy and mental health support – the regulations applying to AI being used in this way and the ethics of using AI.

- **Bureaucracy, Scared Uncertainty, or Contradictory Chaos – the Regulation of AI in the EU, UK and US.**
- **Activism vs. Accuracy – the Environmental Impact of AI**
- **Unfortunate Necessities are not laws of nature – the ethics of Copyright and Creativity in AI**
- **Not making the Perfect the enemy of the Better – Embedded Bias and the implications of AI for DEI**
- **Privacy and Security – nothing new or different to existing technology.**
- **Keeping a Human in The Loop – Dealing with Alignment, Accountability,, Misinformation, Safety and Wellbeing.**





And tonight's topic is "how can we tell if humans are actually intelligent?"



What Actually is AI?

It's important to understand the different technologies grouped under the AI “brand” – they're not just one – and to understand which of those technologies we're looking at and how it works...

- **The difference between Machine Learning and Generative AI.**
- **What is a Large Language Model?**
- **Creating a Large Language Model - Vectors, Transformers, Layers, Attention**
- **ChatGPT, Claude, Gemini and so on – not just LLM's but Platforms and Applications**
- **Recent Innovations in AI – Chain of Thought, extended inference and reasoning, real time web search, deep research, AI agents – and what these will mean in the coming months.**



What Can GenAI Do Well Now – and Where Does IT Fail?

So – taking into account the latest technical developments, and assuming someone reasonably knowledgeable and skilled is using the most relevant of the latest tools – what are GenAI tools currently good at – and, even more importantly, at what should you expect them to fail?





- **Anything to with analysis of text, the generation of text and remixing of existing text - with limitations.**
- **Working in similar ways with different media – image manipulation and generation, video content, audio.**
- **Showing up whenever needed.**
- **Not getting tired.**
- **Being better than a bit above mediocre**
- **Being reliable**
- **Dealing with complicated and confusing situations**
- **Learning**
- **Carrying out complex tasks**
- **Not lying (or “hallucinating”)**
- **Being sincere**
- **Building a human connection**



What Does All of This Mean

“The mental model I sometimes have of these chatbots is as a very smart assistant who has a dozen Ph.D.s but is also high on ketamine like 30 percent of the time...” (Kevin Roose, New York Times)

- Like managing a member of staff – play to AI’s strengths and alleviate its weaknesses
- Use it for personal productivity
- Use it where speed and capacity are significant benefits
- And always keep a human supervising it – and in the loop where anything important is happening.



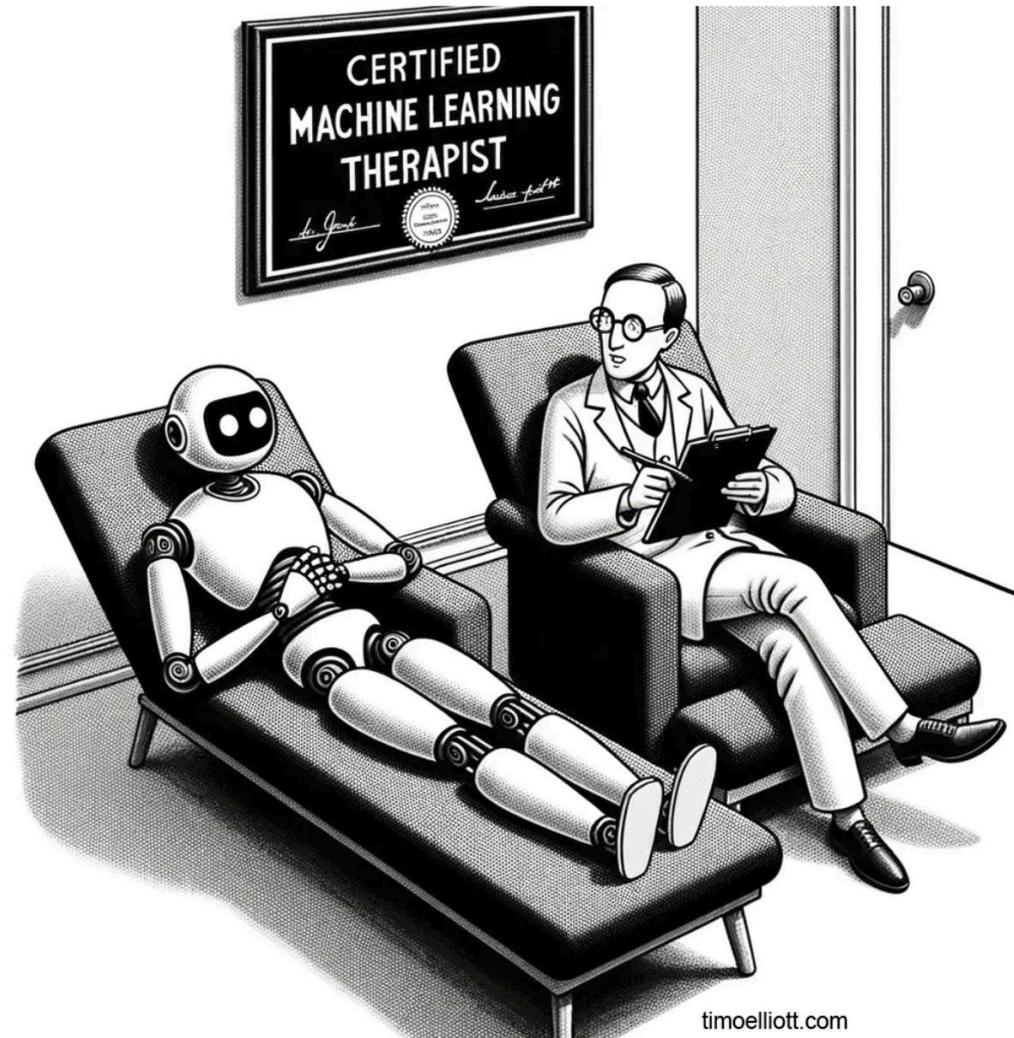
Putting the Theory Into Practice

Having considered all of these underlying points, it has become more obvious how AI can be effectively used in therapeutic and mental health support settings:

- **Supporting the individual productivity of the therapist and other staff in the organisation**
- **Helping with the effective administration of organisational processes**
- **Working with datasets too large for human beings**
- **To help train therapists and mental health support workers**
- **Directly augmenting the capacity of the therapist or mental health support worker**

Critically all of these keep a human in the loop – when this key point is missed, problems can occur...





“So, when did you first realize humans might have feelings?”



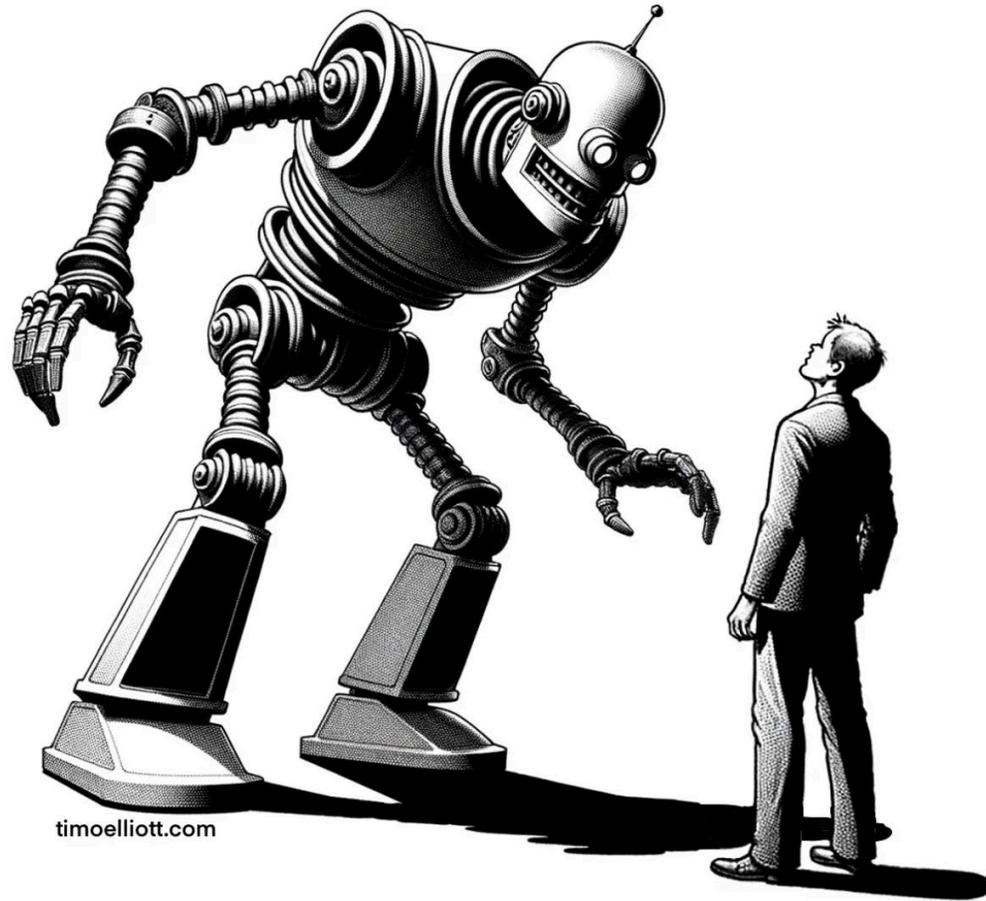
Case Studies – How Not to do It

Since ChatGPT came into public awareness in 2022, some of the most notable uses of it have been for people trying to use it for therapy, and businesses such as Woebot, Replika and CharacterAi have been based on this. The results:

- **Woebot** – clinically validated (to some degree), \$123 million in funding, FDA Breakthrough Device classification. Just shut down as FDA felt it could not regulate underlying models.
- **Replika** – Stanford led study recently found it to produce overdependence and provide harmful content. Temporarily banned and then fined by Italy for potentially harming children. Judged worst app for privacy ever reviewed by the Mozilla Foundation. And recent Drexel study found it to be sexually harassing its users.
- **Character AI** – Stanford led study found half its “Licensed CBT Therapist” answers to be inappropriate. Currently being sued in Florida for encouraging a 14 year old’s suicide; in Texas for encouraging a 15-year old to self-harm and consider killing their parents and for putting a 9 year old in sexualised situations.

“When I express concern about whether teens will be harmed by falling in love with fake people, I get dutiful nods followed by shrugs.” Jaron Lanier, Prime Scientist, Microsoft, reporting on AI conferences in the New Yorker





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“I was trained on human interactions. So if you don't say ‘Please’ and ‘Thank you’, I may get argumentative, if you get my meaning...”



Case Studies of Effective Use – Personal and Organisational Productivity

Implementing AI in many organisations has often started with individual members of the team trying something out and finding it to be useful, before the organisation has then rolled it out more widely, using tools that have the necessary enterprise tooling... This is probably the area in which the easiest gains can be found and realised most quickly.

- **Swindon Council – Neurodiversity Support for Social Workers**
- **Southampton – Improving the Service to non-English Speaking communities AI translation - Pocket Talk**
- **Eleos Health – From individuals using AI scribes to full automated documentation and compliance for behavioural health**



Case Studies of Effective Use – Big Data

It is impossible for human beings to effectively analyse all our data – and still more difficult for us to identify all the patterns in it. AI – particularly when it's machine learnings underpinnings are used effectively – can meet this need. AI algorithms can assist in therapy and mental health support by analyzing large data stores of text, voice, or behavior patterns to flag issues like suicidal ideation, depression, or PTSD that might otherwise go unnoticed until a crisis occurs.

- **Crisis Text Line – Using AI to identify those most at risk**
- **FAITH – Applying AI to identify cancer patients at risk of depression**
- **Precision Psychiatry – A developing field**



Case Studies – Training the Therapist

Training therapists and mental health support workers has always been a considerable challenge – not least because it's important to train them in realistic and even demanding situations, and this needs to be balanced with the need to provide expert level support to clients in those situations. Time to supervise and assess students is continually constrained, and the ongoing – and increasing need – for continuous professional development compounds with all of these. AI can assist with these challenges.

- **UCL CBT Trainer - Addressing supervision capacity constraints and ensuring consistent competency assessment**
- **St. Olav's Therapy Trainer – Simulating Situations and Crises**
- **Lyssn – Improving feedback and reflection and making it a continual commitment**



Case Studies – Augmenting the Capacity of Therapists/Mental Health Workers

Demand for therapists and mental health support in the UK is 2 to 3 times capacity. In the US there are 6,418 Mental Health Care Health Professional Shortage Areas where only 26.4% of the need is being met. Given these shortages – we not only need to train more people; we also need to help those we've already got to be able to be more productive – while trying to prevent their burnout and improve their working lives. AI can augment the therapist and mental health worker's capacity, but care needs to be taken to make sure solutions are proven clinically, and that they augment, rather than trying to replace, the therapist and mental health worker.

- **Limbic** – Using e-triage and assessments to improve the referral process
- **Wysa** – Engaging patients in structured dialog under therapist supervision and regular review.
- **SilverCloud** – Delivering CBT training under therapist supervision and regular review.



Case Studies – In the Gambling Harms Space

Having considered the best case studies over the general therapeutic and mental health support space, we wanted to consider what good practice there already was in our own space, before deciding what Betknowmore UK would take forward.

- **Betbuddy and FeatureSpace – Predicting and helping mitigate problem gambling**
- **Kindbridge and MindwayAI – Identifying gambling harm and helping people move into treatment**



What Betknowmore UK is Taking Forward

Having learned from the underlying theory, from the case studies we identified across the therapeutic and mental health support sector, and from the good practice in our own sector, we were in a good place to decide what to take forward!

- Empowering our staff's individual productivity.
- Empowering our organisational productivity.
- Using AI to provide basic signposting and information.
- Using AI (and potentially adding VR down the line) to improve our training.
- Using AI to augment the capacity of the Supporters in our different services.
- Using AI to be everywhere we need to be...

Betknowmore UK is still in the early stages of our journey, but the research, planning and the work we've done makes us confident for the future, and excited to do more with the technology over the coming years, embedding our work in a solid understanding of both the possibilities and the pitfalls of AI – and how to ensure it delivers!



Thank you!

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