WHITE SPACE
Corporate Innovation Club

BULLETIN

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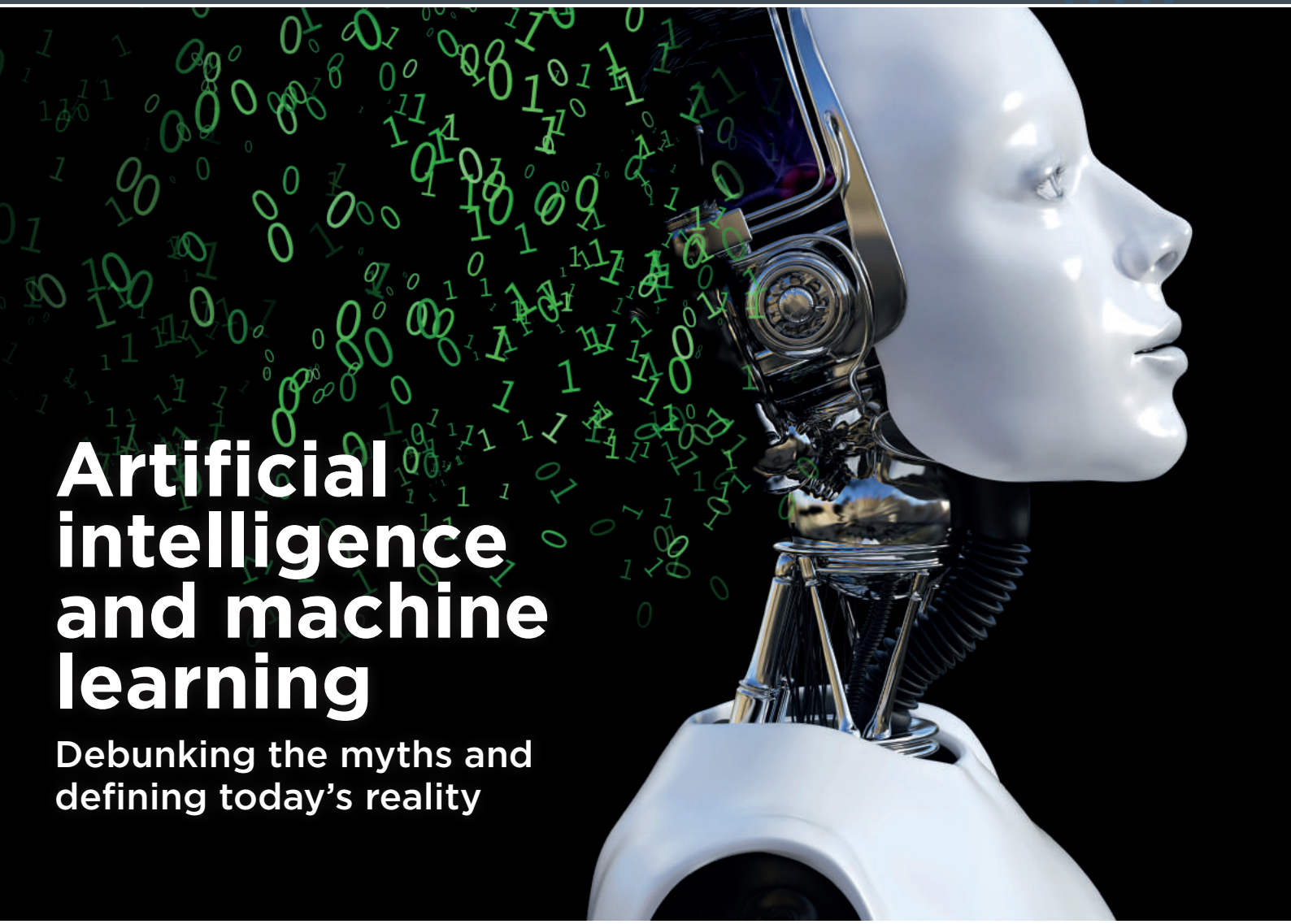

Artificial intelligence and machine learning

Debunking the myths and defining today's reality

Recognise, implement & maximise

The Whitespace Corporate Innovation Club is a community of over 40 international and global corporate brands with a shared passion and interest in using innovation to help create different and new experiences and revenue models. The senior representatives from the different corporates either have a direct remit around driving innovation on behalf of their company or are a key contributor to it. The purpose of the community is to learn from each other – both successes and failures – but also learn from invited subject matter experts around specific topics or themes.

The Club meets bi-monthly and is always hosted by a Club member and chaired by Whitespace. The topics to be discussed have been collectively agreed by the members to have relevance to them and ones where they can both share and learn from. Depending on the topic external experts are invited to present, engage and provoke an honest and open dialogue amongst all the members.

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Meeting Theme

At the largest congregation yet of the Corporate Innovation Club, the focus was on artificial intelligence and machine learning, as well as attempting to separate the hype around them from reality and potential.

Often confused, amalgamated and misunderstood, the two related technologies have recently enjoyed much attention via their newfound status as buzzwords, joining the ranks of VR, drones and blockchain.

Existing as the subject of a buzzword serves as a double-edged sword, of course. AI and ML – as they are more commonly known – are enjoying much attention today. That both spotlights and accelerates their development and potential. There is no smoke without fire – or so the proverb insists – and advances in AI and ML are presently burning bright with potential. But with hype comes a disorderly rush to board the bandwagon, misrepresentation via overenthusiastic marketing speak, and even cynicism from jaded observers all too often burned by embracing emerging technologies with good intentions.

> **Advances in AI and ML are presently burning bright with potential.**

Fitting and important fodder, then, for a spirited and open-minded Corporate Innovation Club get-together.

Key Takeaways

What differentiates AI and ML?

AI and ML are understandably frequently confused. They are both, after all, technological concepts connected to the broad notion of computers possessing the capacity to make independent decisions and 'think' for themselves. AI is the umbrella term here, and refers generally to computers' – and before them other mechanical devices' – ability to process tasks using their own intelligence and decision making capacity. Importantly, the definition of AI continually evolves. As we understand more about both human intellect and computing power, the potential of what AI can be expands and shifts.

Machine learning, meanwhile, is a specific application of artificially intelligent technology to handle and learn from large bodies of data. Machine learning may let a computer choose its own most efficient way to handle a specific task, or let it identify patterns and trends in big data sets that can improve consumer experiences.

As such, machine learning is an example of AI. But not all examples of AI involve machine learning. Both have enjoyed significant progress in recent years thanks to the exponential growth in affordable computer storage and processing power.

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Today we are in the opening stage of a three-part evolution of what AI can do

Experts in AI see that the ultimate evolution of AI – carrying ML with it – will take a three stage form, at least as far forward as is reasonably predictable.

1) First comes 'narrow AI'; the position in which we find ourselves today, where AI can be precisely applied to specific functions.

2) We are approaching an era of 'general AI' that will see computer thinking take on a comparable form to human thinking. Such AI will be flexible, dynamic, subtle, and able to make nuanced decisions, with less input and guidance from human agents if necessary.

3) Finally we will arrive at 'super AI'; something we are currently nowhere near, where computer intelligence will vastly outperform human intelligence. The outcomes of such AI on society, culture, work and environment are near impossible to precisely predict, but the arrival of super AI may disrupt like no technology before it.

> We should consider the current and next generations of AI as a technology to augment human process; not replace it.

Don't fear advances in AI and ML

We have a long way to go before we reach a point where science fiction's vision of AI is anything like possible. However, there was some cynicism in the room about the power of AI to disrupt not just industries, but humans' roles and work in those industries. It was noted, though, that we should consider the current and next generations of AI as a technology to augment human process; not replace it. AI remains far from perfect, and far from capable of understanding human nuance, or non-logical thought processes. It processes information without instinct, gut feeling and compassion. The example was given that in the HR and recruitment space, AI would struggle to pick a perfect graduate; but the technology may be used to monitor and counter the inherent bias that exists in every human. Such a pairing of human intelligence and artificial intelligence is now commonly referred to as an 'augmented intelligence' technology.

AI and ML offer little value without the right framework

As discussion turned to the potential of AI and ML to counter fraud in the financial sector – as well as serve data management and system maintenance functions – a consensus emerged in the room that such technologies are only as robust and reliable as the foundations on which they are built. The quality of the 'data pipeline' – or process through which data is managed, organised and provided for ML – impacts its potential. Similarly, society at large's willingness to share – or withhold – data will drastically effect what can be done with AI and ML. In that context, there is already a major challenge to those wishing to employ or deploy AI and ML methodology and services in the UK. Our data and technological landscape is currently fragmented, asymmetrical and disordered at a national scale. It would be easier to couple AI and ML with existing business, government, academia and so on with a 'fresh start' or 'blank slate' with regard to national technology infrastructure.

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AI and ML are today about saving money; not generating revenue

Currently AI and Ml are best applied in a Corporate innovation context to bolster efficiency, analysis, planning, systems management and so on. Short of providing AI or ML services as a business, the technologies are rarely directly a means to generate revenue.

Now is the time for Corporate innovators to partner with academia

Most progress with AI and ML is happening in universities, labs and journals. Academics, however, need to explore real world applications of the technologies, and real world data sets. As such there is an enthusiasm to partner with corporations from academics specialising in AI and ML today. Similarly, Corporate innovators should consider bringing students and early stage start-ups into their innovation initiatives concerning AI and ML. Additionally, with much of the computing power behind AI and ML existing and being distributed through the cloud, increasing numbers of cloud providers are looking to partner with others to explore the practical potential of AI and ML.

> **The more autonomy to think AI has, the harder it will be to predict what is learned through its deployment.**

As the capacity of AI and ML increases, procuring meaningful results will be harder

Consider the extreme example of a future AI-enabled computer tackling a Corporate innovation function alone. With the capacity to make its own decisions, it may decide to pursue a new line of enquiry, change the methodology, or even cancel the project. Put more simply, the more autonomy to think AI has, the harder it will be to predict what is learned through its deployment, making it tough to know if an initiative is valuable until it has completed.

Many Corporate innovators remain unconvinced

Frank discussion highlighted the fact that many Corporate innovators are yet to fully 'trust' the capacity of AI and ML, or have faith in its ability to consider the human stories impacting any function or decision. However, it was pointed out that while many state publically that they do not trust AI, they are meanwhile – perhaps unknowingly – already trusting ML to handle data and personalise the likes of web browsing and shopping experiences. Discussion also explored the controversial point that AI and ML potentially work best when their presence is unknown.

There is no such thing as good and bad AI and ML; only good and bad applications

While the far future 'super AI' detailed above may include computers with a moral compass, for now the responsibility for the ethics of AI and ML lies solely with those handling their application. As such, AI's potential in a Corporate innovation context is defined by Corporate individuals differentiating ethical and unethical applications, while managing the former. It is also worth watching how society and industries respond to advancements and failings in AI and ML. Recent missteps by giant technology companies have demonstrated that the general public is aware of AI and ML's potential to be inappropriately applied; but equally that people are happy to carry on using the platforms of such outfits despite the controversy. Convenience may win out over controversial AI and ML use cases.

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Corporate innovators have a role in guiding the ethics of AI and ML's implementation

As discussion at the Club turned to how to safeguard society and industry as AI and ML advance, the perhaps inevitable topic of regulation was addressed. There was near unanimous agreement that regulation may not be the best approach here. Regulators necessarily tend to respond to meaningful trends in their wake, rather than lead thought and debate from a position ahead of the curve. That issue could be particularly problematic with a technology as innovative, complex and fast moving as AI and ML. As such it was put forward that ethical decisions around the implementation of AI and ML in a Corporate innovation context should be addressed from within a given Corporate.

> **Regulation may not be the best approach here.**

Ethics committees are already well established as a means to debate and guide the use of emerging technologies like AI and ML, particularly in academic contexts. More questions must be asked, however, about where in a Corporate structure an ethics committee can best serve its purpose.

For Further Consideration

- Will we benefit from AI and ML with more potential if we can first install more diversity in the Corporations adopting it, and the panels, committees and teams shaping it?
- What responsibly do investors in AI and ML have in guiding ethics, or working with Corporates to do so?
- Should we be worried that some AI experts are allegedly noticing that bots are unfollowing them on social media? This example was presented playfully in one of the meeting's lighter moments, but presents an interesting thought experiment to explore oneself.

cic@white.space
www.white.space
Whitespace, 3rd Floor, 58 City Road, London, EC1Y 2AL