# Why AI is a great match for your data strategy

Author, Jason Foster

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**AI – a rose by any other name**

Firstly, we should really discuss the difference between machine learning and AI. In some circles, it's become the norm to use these two terms interchangeably. But that's a mistake.

**Machine learning** is AI, but not all AI is machine learning. Machine learning is a subset of AI and it describes how computers can learn from data sets. Importantly, the data sets are limited, restricting the AI to just a few different functions (based on what data it has been trained on). So, an AI trained with images of people's faces will rule at facial recognition, but fall flat with voice recognition.

**AI** is designed to mimic human intelligence. Instead of just a few data sets, a computer is given access to a heap of different data and just left to learn for itself. It means that a computer will know about many different things, and not just restricted to one or two tasks. Most of the AI you see around us today, that's machine learning. True AI is still a little way off…but we're getting there.

**Banking on AI**

Ever used a debit or credit card? You're interacting with AI. When you spend your hard-earned cash, machine learning is busily detecting fraudulent transactions. It also helps financial institutions manage risk when approving loans, credit cards, and mortgages. The AI determines your usual spending habits, income and credit history, and from this, it can tell whether you're a safe bet (or not) for one of their products.

Of course, AI can facilitate decision making, but on many occasions, I believe it mustn't make those decisions itself. There needs to be a degree of human oversight, especially when something as life-changing as a mortgage is being decided. Banks need to balance the risk of providing their product with the need to give a good service and access to products.

Without that human intervention, it creates a risk of AI becoming black box (that's the type of AI where it is built to reach a certain outcome and then set loose to make decisions such as trades on the stock market). That's not good as it can lead to biased decision making that isn't instantly recognisable as such. There's a good example in Weapons of Math Destruction, where an algorithm began automatically approving white male college applicants at a much higher rate than their black counterparts. Now obviously this isn't the objective of deploying AI in your business, so more thought and guidance is required.

Make sure you always know (and document) how your AI comes to its outputs and any decisions. Also, make sure a human always has a handle on things. GDPR now requires as much – it's a legal requirement where personal information is involved.

**AI as your future workmate**

We all dream of inbox zero. Thanks to machine learning, that's a much more possible task. Spammers are using increasingly sophisticated ways to break into our inboxes, meaning that traditional spam filtering techniques are about as effective as a broken umbrella. Machine learning keeps up with the latest spam tricks and works to keep the spam out of our bulging inboxes.

Conversely, there's also AI that can answer your emails for you. Okay, so it's not going to tersely reply to the fifth round-robin that Kevin sent this week, but it can provide some standard messages to help you focus on other work. I'm also fond of x.ai, which I use to save time when booking meetings. You'd be surprised by how much of your working day is taken up with these little activities.

Therein lies a small, but mighty function of AI. In taking over our menial tasks, machine learning allows us to work on higher-level strategic activities. It's probably the first experience your employees will have with AI at work and an easy way for your business to experiment with integrating AI tools. Plus, it gets employees used to AI without imagining the Terminator as their future co-worker.

**AI across industries (and departments)**

Specialised AI is being used in the legal, marketing and HR fields. In legal, it is helping lawyers sift through paperwork faster than ever before. This means mergers and acquisitions are completed more quickly (meaning a better deal on the table), court case outcomes are predicted with greater accuracy, and junior lawyers no longer have to burn the midnight oil highlighting cases for their seniors.

In marketing, machine learning is helping companies craft super personalised and targeted communications. Leading to less irrelevant marketing for everyone, and saved revenue (with greater returns) for businesses.

And in HR, AI is proving a great ally. It can categorise CVs, saving a lot of time for harried HR departments and assist with interviewing candidates. Companies like Headstart AI are offering companies the ability to personality test candidates, for instance.

**AI needs data**

The uses of AI are incredibly varied, but there is some common ground. For one, they all need to start somewhere – with data. That underpins everything.

It's no surprise that the companies leading the way with AI (Google, Amazon and Apple) have a mountain of data. The battle to reign supreme over AI is going to be won by data. Google has a huge amount of data at its disposal. There's not only all our search data, but also data from Gmail, Adwords, and now from Google Home and Pixel. It illustrates perfectly how valuable data is today. If your business isn't using its data, you're wasting a precious resource.

Of course, you do need a plan to make the most of your data. If you plan on implementing AI anytime

soon, you'll also need to sort out your data so that an AI can use it. A growing challenge that we're seeing time and time again is that businesses often aren't AI ready. Is yours?

**AI is here to make us smarter**

There's also something to be said about the way AI is being used currently. Yes, it's not yet true AI and is rather limited in its current form. However, even when true AI is developed, it won't take over every job on the planet. Instead, AI is going to work with us to make us better. That can be something as simple as clearing out junk emails, cleaning up a database, or capturing the key points in a document, all the way to advanced AI that supports soldiers in the battlefield and drives our cars. Just think about the difference that Alexa has made to many homes. That kind of consumer-focused AI is going to have just as much (if not even more) impact in our workplaces.

We're going to be entering a new era of intelligence, one where our own is supplemented by AI. It'll make us work more efficiently, faster, and with greater accuracy.

**Bringing about change with AI**

Change is difficult, and AI is bringing a huge change to our lives. We're just about getting used to having machine learning in our homes and on our phones, but soon it'll be in every aspect of our day.

For businesses, there's a degree of future-proofing that you can do. You can keep up to date with the latest AI tools available and under development (CognitionX are doing great work in this space to help bring clarity to it). That way, you can determine whether the tool will help your staff at all.

Data is like gold dust in the age of AI. So make sure you take advantage of it. The first thing you'll need to do is create a data strategy. All your use of data runs off of that. The second thing you'll probably have to do is hire in someone data-savvy. That means a Chief Data Officer, or similar to help lead the charge. They'll be able to steer you right when using your business' data. You might think that you also need a Chief AI Officer, but I'd argue that they aren't completely necessary. You will need some AI and machine learning expertise accessible to your business, however, to use it to its full potential.

AI is going to be everywhere. There's a tremendous untapped opportunity for a business to beat everyone else to it. With the right AI tools, you can create a leaner, meaner version of your business (and massively outpace your competitors). As with any initiative, however, you'll need a strategy to use AI effectively and to get everyone on-board with your plans. As it currently stands, AI will likely make up part of your tech stack across separate departmental strategies (HR will use one AI tool, marketing another, and so on...). However, as it develops towards true AI, it may very well require a whole strategy of its own.

Start with the opportunity you have or the problem you are trying to solve and work out whether AI is the right solution – instead of starting with AI and finding a problem that fits it.

Definitely experiment with some AI now though, before the market gains full maturity and everyone hitches a ride on the AI bandwagon. As everyone else is jostling to get on, you'll be miles ahead.

## About the Data Science Foundation

The Data Science Foundation is a professional body representing the interests of the Data Science Industry. Its membership consists of suppliers who offer a range of big data analytical and technical services and companies and individuals with an interest in the commercial advantages that can be gained from big data. The organisation aims to raise the profile of this developing industry, to educate people about the benefits of knowledge based decision making and to encourage firms to start using big data techniques.

## Contact Data Science Foundation

Email: admin@datascience.foundation
Telephone: 0161 926 3641
Atlantic Business Centre
Atlantic Street
Altrincham
WA14 5NQ
web: www.datascience.foundation