

3 Things You & Your Kids Need to Know About AI

What is an algorithm and can it help you choose what to eat for lunch? Can ChatGPT do your homework? And when you watch TV, is it watching you back?

Artificial Intelligence can seem scary, so working out where to use AI and why is an important part of making the best of this exciting technology. But don't worry – here's Dr Matt to explain everything you and your kids need to know about AI!

Dr Matt Agnew is more than a scientist and a self-confessed nerd – he's a communications powerhouse making STEM fun and accessible for everyone. In his new book, *Is My Phone Reading My Mind?*, Dr Matt explains everything kids aged 8 to 12 (and their parents) need to know about AI in a fun, funny and engaging way.



Here are 3 common questions about AI answered by Dr Matt!

1. CAN AI DO MY HOMEWORK?

You can be doing your homework and simply ask Siri, or Alexa, or Google Assistant for help for a given question or task, and they will tell you the answer. This seems absolutely brilliant, right? How could this be unethical?



Well, a once-off probably isn't bad. But what if you start doing it more and more? Every time you hit a problem in your homework, you just ask the virtual assistant for the solution. You might get the answers right, but you're becoming reliant on the virtual assistant. You're not learning the subject you're studying, and worse, you're not learning how to problem-solve. How do you approach something you don't know how to do? Where do you start?

What about ChatGPT? It can absolutely answer questions for you. You can get it to quickly tell you simple things, like *what's the population of Australia?* or *what are Australia's main exports?*, and even ask it to perform more complex tasks like *write me a 500-word essay on the history of space exploration.*

This is a truly magical example of AI, but it can be dangerous too. It means ChatGPT is an easily accessible tool that you can use to cheat, 'replace your thinking' and become reliant on to answer questions and solve problems. Just like the calculator, we want AI to be a tool that we use to help *enhance* our thinking and ability to problem-solve, not *replace* our thinking and ability to problem-solve.

2. CAN AI CREATE ART?

Want to see just how advanced AI is at creative tasks? *Edmond de Belamy* is a piece of art that was generated by a clever AI algorithm (part of which has amusingly been added to the bottom of the painting as a 'signature') and then printed on a canvas. Not only is it an example of how AI is able to do things we would consider creative or that humans will only be able to do, but it also has admirers in the art world – the piece was sold for US\$432,000! But is it art if a human hasn't created it? You decide!



3. CAN AI INFLUENCE MY THOUGHTS?

Imagine your teacher has organised a special lunch for your class, and a decision needs to be made about whether to order pizza or hamburgers for everyone. To decide, your teacher takes a vote. It turns out that 18 people want pizza, and only 12 people want hamburgers. Pizza wins because it has the most votes, and so your teacher orders pizza.

Now let's shake things up by introducing an algorithm that controls what adverts you see on your phone, or computer, or TV. It just so happens that this algorithm is designed to want everyone to choose hamburgers. The algorithm learns who the pizza lovers are and who the hamburger lovers are by looking for behaviours such as:



- people who search on Google for pizza
- people who are following pizza accounts on social media such as Instagram or TikTok
- people who have bought more pizza than hamburgers with their bank cards (maybe not you or your classmates, but this could happen for your parents)
- people who use a map app and have had their location logged at known pizza restaurants.

The algorithm decides people who do the above have the **Pizza Lovers** profile. The algorithm follows the same process for hamburgers to classify people with the **Hamburger Lovers** profile.

Now here's the really clever part. Since the algorithm wants people to eat hamburgers, it doesn't bother targeting **Hamburger Lovers**. It's interested only in **Pizza Lovers**, because it needs to convince them hamburgers are better. So it targets them with ads that promote hamburgers: how they're healthy, how much fun people have eating them, and how delicious they are. The ads also show **Pizza Lovers** how disgusting pizza is: how bad it is for people, how expensive it is, how unappealingly the cheese melts off it. It might even completely make things up – maybe it claims the dough is toxic or unhealthy.



The teacher takes the vote again, just to be sure. Now only 6 people vote for pizza, and 24 people vote for hamburgers. The algorithm has swung the vote in favour of hamburgers because it figured out who the Pizza Lovers are based on how they behave, and then bombarded them with ads that convinced them hamburgers are the better choice.

And this has happened in the real world, but in much more sinister ways where there are bigger outcomes at stake, such as who leads a country. AI can be misused to manipulate the facts and harm democracy. It's important that we are aware of this, and that rules and laws are created to ensure we're safe from dangerous and unethical outcomes.

Text © Matt Agnew 2024. Text has been adapted from Is My Phone Reading My Mind? by Dr Matt Agnew.