

Artificial intelligence coming sooner than you think, experts say

By the National Reporting Team's [Thuy Ong](#)

Posted 13 Apr 2017, 6:06am Thu 13 Apr 2017, 6:06am



Photo: Experts say robotics will soon replace the work now being done by humans. (ABC Gold Coast: Damien Larkins)

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If you have seen the latest Wolverine movie, Logan, you might have noticed a crucial scene where automated trucks speed up and down the highways of the United States.

Far-fetched? Well, not really.

Experts say artificial intelligence (AI) is coming sooner than you think and robotics will soon replace the work now being done by humans.

And they will not just replace truck drivers — think taxis, trains and even your local salad maker.

In Australia, the jobs most at risk include those involving driving, according to Toby Walsh, professor of artificial intelligence at the University of New South Wales (UNSW) and the CSIRO's technology unit, Data61.

"There's a real financial imperative for developing autonomous cars," Mr Walsh said, adding the industry was currently worth around \$1 trillion.

"One thousand people will die on the roads in Australia in the next year, and more than 95 per cent of those accidents are caused by driver errors. So the quicker we can get the human [factor] out of the loop — the person making those mistakes — the better, because our road deaths will plummet.

"There is an AI arms race between major car companies to perfect autonomous cars, from old guards like General Motors to newer players like Tesla."

40PC OF AUSTRALIAN JOBS 'WILL BE AUTOMATED BY 2025'

Cars already have the ability to drive on autopilot on highways, but Mr Walsh said he believed complete autonomy would be achieved within the next few years, about 2020.

THE DRIVERLESS CAR REVOLUTION



[A future where your driverless car minimises your time on the road and lets you do all things you'd rather be doing might not be that far away.](#)

Annual worldwide revenue from AI is projected to hit \$37 billion by 2025.

In 2014, in a speech at MIT, entrepreneur Elon Musk called AI probably humanity's "biggest existential threat".

According to the Committee for Economic Development of Australia (CEDA), 40 per cent of Australian jobs will be automated by 2025, with that number even higher for rural jobs at 60 per cent.

AI can enable farming to be automated, with technology enabling machinery, for example, to determine where to plant and when to irrigate.

Atul Narang, chief information officer at financial technology company HashChing, which uses AI in its online brokering product, said:

"There will be some job losses, which is a big concern from the ethical point of view for a lot of people, but that loss can be covered so those people can then be trained. It will actually be a change in the nature of jobs."

Already the process of automation is being felt.

Silicon Valley company Chowbotics recently unveiled a salad-making robot called Sally, which it said could make salads quicker and more calibrated to calorie needs than a human could.

Sally costs about \$30,000 and is aimed at businesses and supermarkets, with a smaller household version in the works.

The market for food-service robots is already worth billions of dollars, according to Bloomberg, and in the future, could potentially replace cooks and kitchen hands.

PEOPLE TO HAVE MORE TIME FOR CREATIVE PURSUITS

Over the next 10 or so years, Mr Walsh said some tasks undertaken by stockbrokers, lawyers, and even radiologists could be replaced.

Video: ['Futurist' Martin Ford looks at AI and what the robot revolution will bring \(ABC News\)](#)

In some cases, machines can already read X-rays with greater precision and accuracy than doctors can, he said.

But creative industries would be safer, with anticipation that, as robots take over more menial jobs, people will have more time for creative pursuits like art, novels and music.

As machine learning — the ability for computers to learn without being programmed — becomes even more sophisticated, Mr Walsh is hopeful that will mean the quality of life for everyone improves.

"We could give first-world health care to a third world, we could put that sort of technology on an app, on a smart phone, and provide it to everyone. People are dying needlessly for diseases we know how to fix every day," he said.

AUSTRALIA 'FAR BEHIND'

With some of the world's largest companies pouring billions of dollars into AI research and development, Australia stands at the crossroads.

HOW WE'LL USE DRIVERLESS CARS



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At the same time, Australian companies say more support is needed for development of the technology locally, and for solid government policy to bolster opportunities for jobs lost to automation.

"There is [a] huge boom in China and in the US towards AI and that's why things are moving very fast in those countries, where we are far behind," Mr Narang said.

"Because there is no certain, formal things happening here, there is no specific AI meet-ups happening, there is no specific training in AI.

"I can see now in some of the universities, they have introduced courses around data scientists, but that again doesn't talk much about AI, it's more of [just] theory."

ETHICS OF AI

AI has also been referred to as the "fourth industrial revolution" and, with the technology rapidly changing the way humans interact with the world, a number of ethical bodies have materialised.

Late last year, Facebook, Amazon, Microsoft and Google formed a group called Partnership on AI, a not-for-profit that plans to formulate best practices in AI technology.

ASX-listed company BrainChip's chief executive Louis DiNardo said:

"I don't discount for a minute that any technology can be used for bad or evil purpose."

BrainChip is a software company that has developed a neuron processor that works like the human brain.

ANTICIPATING THE RISE OF THE MACHINE



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The technology takes audio or visual inputs and converts that to electrical impulses that algorithms can interpret and use.

Its technology has been used for visual surveillance at casinos, including counting cards, and visual inspection in building machinery, such as aircraft.

"At this juncture, we can learn autonomously — that doesn't mean we can act autonomously, the decision-making of what to do with the information is still a way off — but I do think: what is ethical?" Mr DiNardo said.

"I think it's incumbent upon society to make sure we keep an eye on whether it's ethical standards for artificial intelligence, ethical standards for governments or ethical standards for education systems, and that's our responsibility."

The primary concern is the collection of data, how that data is stored, and how algorithms make decisions based on that data.

"Do we let progress run and then legislate afterwards to protect vulnerable groups? Or do we do something differently?" ANZ chief data officer Emma Gray said at a CEDA conference on the fourth industrial revolution.

"I think policy makers and policy legislation probably need to evolve at the same [rate as] commercial ideas do, so we can have the conversation in the right way and not in a way that's too late for all groups of society to benefit."

<http://www.abc.net.au/news/2017-04-13/artificial-intelligence-coming-sooner-than-you-think-experts-say/8440358>

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