

By SHAHRUL AZMI YUSOFF

INTELLIGENCE is something natural that every human possesses at different levels of life and the level, of course, depends on the measure of IQ and/or experience. Meanwhile, the word artificial is pretty much understood by being a copy of something natural produced by human.

It is like the artificial flavouring you have in foods and beverages, as an example, the taste of durian in coffee; without the presence of that thorny fruit, tempting but weird.

If one combines the words artificial and intelligence, like the durian-flavoured coffee, you will have the creations of human intelligence without the presence of the natural yet powerful brain.

The "brain" is now taken over by intelligent machines that work and react like humans, slowly exceeding the potential of our natural thinking capacity. We often nod as if we understand every bit of the AI but the way it works is still perplexing to many.

How does the brain work?

Now that we understand the aim of AI is to imitate the thinking process in making decisions, it is inevitable for us to first comprehend the manner of how the human brain works.

How do you come down to the decision of sipping that cup of durian-flavoured coffee prepared by your mother-in-law for example?

The brain consists of a billion nerve cells which coordinate your actions supported by a network of neurons that process inputs from the natural sensors of human being. Smells, visions, sounds and touches are the inputs from your nose, eyes, ears and fingertips which act as the sensory devices.

The coffee in a cup presented to you is a matter of interest. All the inputs gained from the observations combined with your experiences are then processed by the brain before the big decision of sipping or refusing the cup of coffee is made. Still unclear?

Now imagine your actions in gaining the inputs. By the look of the liquid inside the cup being black, your brain classifies it as coffee.

Artificial intelligence in a nutshell

Smelling the aroma, you can tell that it has durian in it. Hearing continuous persuasion from your wife, "Drink it! It's nice", your brain tells you that sipping the coffee is of great importance to your marriage.

You start touching the side of the cup; this time your brain tells you that the temperature is right. Combined with the knowledge that this coffee was prepared by your mother-in-law, therefore it wouldn't be toxic (it might not apply to everyone); the decision you made is to sip it.

How does AI work?

Traditionally, AI is just a series of algorithm based on inputs and historical data. It is like the daily calculators with memories function but by means of very far more complex mathematics solving potencies.

Nowadays, AI is a very sophisticated tool with self-learning capability and often related to big data analytics.

For as much you need to punch in the numbers that requires solving on your calculators, the same goes with AI solver, and these are referred as inputs.

This time around, imagine, you are blindfolded, handcuffed at the back of your body, ear plugged and nose fully stuffed. Your brain is now paralysed as the sensors can no longer supply its inputs in making decision about the coffee presented.

In letting the AI to act as your brain and decide whether to ignore or sip it, the acquisition of inputs must now be made available.

An electronic thermometer, digital camera, chemical sensors and microphone are simple probes to gather the necessary inputs imitating your finger, eyes, nose and ears.

Once all the signals from the probes are sent to the AI solver, decision is made by solving all that in pre-input formulas.

It can be commands in hundreds of lines at which the answer to it is yes or no, meta-

phorically like the answer you get after punching the sign equal on your typical calculator. The major important features of the AI compared to traditional computers would be the ability to learn from historical data. It fixes the algorithm after every single iteration and this can be considered as the biggest breakthrough of mankind, very often referred as deep learning by the scientist. Identical to the human brain that uses experience to improve decision making, the more situations being fed into a machine, the more intelligent it gets day by day.

What is the risk of AI?

The biggest question frequently asked every time I finish my lectures is the potential of AI taking over humanity.

My answer is always consistent, it will one day, but not in a hundred years.

Mind you, the period can be shortened if the infrastructure improves tremendously by new findings, what is that? I will now be introducing more metaphor from this point forward.

Let us go back to the durian flavoured coffee example to understand the resources needed for AI to improve decision making.

When you decide to drink the coffee, the decision is made in a split of a second of course, avoid the nagging from your mother in law. That is the unique ability of our god created brain; it processes information faster than the lightning.

This is still in the infant stage with AI, the processor needs to be much faster and robust, and opposite to your phone that gets "hang" every now and then.

Next is to understand the learning process through the historical data or better known as data training. Human logic in thinking is so complicated and varies between cultures.

The type of smiles directed to you by your other half carries different meanings between a go or no go.

Only after years of marriage you would have all the experience to understand those smiles. That is data training complications in AI, scientist requires tremendous amount of inputs and outputs for the decision making and it would require massive investment for the gathering and processing activities.

The AI will eventually have the risk of overtaking human at the very end.

Why would I say that?

It is because the machine doesn't age as fast as human being and starts losing the capability to think. Like a wise man become wiser with age, same goes with the AI getting smarter with data trainings.

However, the later doesn't carry the potential of being senile.

An AI machine will remember every bit of inputs fed into it for as long you don't erase it, meanwhile a wise man might one day, forget where is that reading glasses he wore just five minutes ago.

Recently AI is popular with prediction, patterns of human behaviour are classified before the machine can decide on what information to feed.

Take Google for example, it is now working like magician, feeding every interest that is related to you based on your browsing history.

To whose advantage? That's still a big question unanswered.

On that note, I would like to end this article by reminding the readers that we, humans, don't often get to be a wise man at the age of 94 that is fit to think based on the vast experience he had.

Contradictory to that, machines will never lose its memory and will only improve as the days go by. Grab a book and start reading before it (the AI) really takes over.

Shahrul Azmi Yusoff is the director of Industrial Centre of Innovation in Smart Manufacturing, Sirim Industrial Research. The views expressed here are the writer's own.

Fuelled by Volvo, Geely seeks launchpad to enter auto giant orbit

By YILEI SUN AND BRENDA GOH

CHINESE carmaker Geely plans to use a platform developed with input from Volvo to build new models in Malaysia for its partly owned Proton brand, a strategy that shows how it aims to accelerate its push to become China's first global auto giant.

The yet-to-be-finalised plans for Proton are just one strand of a Geely project to revamp factories at home and abroad using joint platforms it has been perfecting with Volvo since 2013.

Geely bought the Swedish brand 10 years ago for US\$1.8bil - a deal that raised its international profile and sent shockwaves through the global auto trade.

Senior Geely officials and engineers told Reuters that a project dubbed Compact Modular Architecture (CMA) will allow them to develop, design and build different types of compact cars with similar mechanical layout faster than before - and at lower cost. They said CMA, along with a platform for smaller cars known as B-segment Modular Architecture (BMA) that Geely plans to roll out for Proton, allow them to harness the Swedish automaker's technologies and Geely's capabilities in cost control, supply chain management and local production.

"CMA will be the core of Geely's future architecture design ... We learn technologies and build up talents through developing it," said Li Li, vice-president at Geely Automobile Research Institute, confirming the Proton plan during an interview in Ningbo, south of Shanghai.

Li declined to disclose details of general

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Li Li

investment, financial targets or a timetable for expansion plans.

From its lowly foundation in 1986 in Taizhou on the east coast as a maker of refrigerator parts, Geely has grown into one of the biggest players in China, the world's largest auto market accounting for nearly one in every three passenger cars sold around the planet.

Geely now sells more than two million cars a year across all brands, ranking it not far from the world's top 10 automakers by unit sales. The CMA platform in particular will allow Geely and Volvo to design vehicles more quickly and cost-effectively, Li said, providing a technological springboard towards a higher market share at a time when the auto industry must embrace a future featuring electric and autonomously driven transport.

Global ambitions

Like Geely - an anglicisation of the Chinese word for "lucky" - domestic peers Great Wall Motor and GAC have branched

out with their own versions of vehicle platforms, harbouring greater ambitions for selling cars in major Western markets.

But grand plans have previously been delayed, or simply cancelled, amid a lack of practical preparedness, analysts have said, against a backdrop of years of trade tensions between China and the United States that have roiled the global economy.

At the same time, attention has been diverted to deal with stalling sales at home as the pace of China's growth has slowed.

In its pursuit of global automaker status, Hangzhou-based Geely is now holding talks to merge the Volvo Cars business with its Hong Kong-listed Geely Automobile - worth about US\$22bil by market value, bigger than famed industry names like Fiat Chrysler Automobile and Nissan Motor.

As well as the 49.9% stake it took in Proton three years ago, the broader Geely group - Zhejiang Geely Holding Group, led by Taizhou-born billionaire Li Shufu - now also comprises a 9.7% stake in Germany's Daimler AG and a majority

stake in British sport car brand Lotus.

And while giants from Toyota Motor Corp to Volkswagen AG and General Motors Co have followed a similar shared platform projects for their respective brands, Geely's strategy is a first for a Chinese company.

The automaker plans to develop all its future models for the Geely and Lynk & Co brands on CMA or other related product platforms, like BMA.

It is also developing a new architecture to accelerate the launch of pure battery electric vehicles with intelligent connectivity functions, said Li, a former Ford engineer.

In addition, Geely wants to shift development of next generations of some popular existing models, like Borui and Emgrand sedans, to those architectures, he said. It takes around 18 months for Geely to significantly change a CMA-based car, versus 24-30 months to do so on a non-CMA-based model.

Using CMA, plant managers can switch production of different models to maintain smooth overall capacity utilisation rates at production lines, said Oskar Falk, the Volvo-trained head at Geely and Volvo's first joint production site in Taizhou.

The plant already exports Volvo Polestar 2 electric sedans to the United States and Europe, and is preparing to make Volvo's first battery-powered electric vehicle, Falk said. Geely also plans to start exporting China-made Lynk & Co 01 SUVs to Europe this year. - Reuters

Yilei Sun and Brenda Goh write for Reuters.