Podcast Transcript

The Lion's Den: Demystifying Artificial Intelligence - Episode 2

Rupert Lion, Managing Partner, Boyden United States

Rupert Lion (00:02.382)

Okay. Good. So we are now recording.

So joining us today, we have Nagendra Bandaru, who is currently president and managing partner at Wipro Enterprise Futuring. So he has over 25 years of experience deeply embedded in thinking about the future of technology, and in particular has been working closely with AI for many years. But I'll let you introduce yourself as I'm keen not to do you a disservice. So tell us a little about yourself then, Nagendra.

Nagendra P Bandaru (00:36.739)

Yeah, I've been with Wipro for 25 years in various roles. I presently run at P &L for $4 .5 bn with about 145 000 employees, cutting across what we call digital operations, platforms, cybersecurity, data, AI, and applications and experience.

So broadly, that's one of the important global business lines of Wipro, I'm also a member on Wipro's executive board. That's what I do for a living.

Rupert Lion (01:21.486)

Okay, good to know. So we've heard what you do for a living. Maybe let's start a little bit with on this topic of AI, which is a very broad one. Maybe you can just share with us a little bit about what AI actually means to you personally.

Nagendra P Bandaru (01:37.635)

You know, AI fundamentally is, we have human intelligence, the brain, the brain I believe has got about 12 .8 billion neurons or the nerve cells between the spinal cord and the brain. And that's where our intelligence comes from. And we are the only living organism which can speak here.

Rupert Lion (01:44.27)

Mm -hmm.

Nagendra P Bandaru (02:06.755)

see and decipher even in our dreams you know we think you know so human intelligence is unparalleled no organism living organism in the universe has this kind of intelligence now artificial intelligence that is natural intelligence in layman terms artificial intelligence is using software fundamentally to think like human you know I could say it's like a mini brain and you know our brain sometimes we forget names we forget marriage anniversaries of our own marriages we forget birthdays so what we are replacing is

Rupert Lion (02:54.638)

You

Nagendra P Bandaru (03:02.243)

The human intelligence is unparalleled and unbiased. There is so much of memory and you cannot do recall memory all the time. So the artificial intelligence is fundamentally we creating, we are teaching software how to be intelligent. Let me put it this way. You know, how to read a book, how to write an essay, how to create poetry.

How to create a movie or even how to educate you, you know, the students use for homework. So artificial intelligence is complementing human intelligence to do things. And how it complements is the COVID vaccine. Normally a polio vaccine or any vaccine takes 18 to 20 years to roll it out. You know, you…

Rupert Lion (04:00.558)

Mm -hmm.

Nagendra P Bandaru (04:01.539)

you test it on various races you start you start testing first of all the combination of molecules you know what sort of it's a combination of biology chemistry even physics to an extent and it is a lot to do with computations now hitherto scientists or anybody who is in the vaccine industry were doing constantly the what do you call manual way and very difficult data crunching you know they used to experiment a lot and it used to take about very long periods of time and then they used to do clinical trials on living organisms if it doesn't work they used to go back to their lab and retest it again take the results again test on living organisms and some sort of good results come.

they used to go for clinical trials on certain humans. Now within humans we have different races, within tropical climates, different behaviors and different environments, social environments with which we come up. So it used to be a 20 -year cycle for a drug or a vaccine to come out in the general layman terms. During COVID, whether it is Moderna or Pfizer, they came in about two years. And they have been doing research for many, many years, the intersection of biology, chemistry, which is fundamentally molecular biology and chemistry, genetics, as well as AI and data. So a lot of disciplines have come together and they were able to code the RNA very quickly and thus we had a vaccine in two years being rolled out. So that's the power of human intelligence whereas with complementing with artificial intelligence. We can have drugs discovered faster, diseases can be controlled faster, education can be more virtualized, you have a lot of data to understand customers.

Nagendra P Bandaru (06:26.883)

So, you can do many things with today. Now, how it all started is we didn't have the computational power, you know, in the hardware and with with Nvidia, you know, launching the GPUs, they started this revolution of high performance computing. And that's why you see the semiconductor industry.

Rupert Lion (06:29.902)

Hmm.

Nagendra P Bandaru (06:55.907)

playing a critical role in artificial intelligence because we need the super computational power to crunch the data. So just imagine 12 .8 billion neurons getting replaced with petabytes of data and this is all coming together, human intelligence and artificial intelligence.

Rupert Lion (07:19.054)

So it's interesting because there's a number of things I wanted to touch on in what you just talked about. Let's start at something which I think a lot of our listeners will want to really unpack, which is around the difference between the data and the processing of the data and the outputs from the process of that data. Because I think there's a lot of myths around what AI can do. And I think part of it is predicated on assuming that it knows everything. But tell us a little bit about what AI…as a whole actually knows and how it knows what it knows.

Nagendra P Bandaru (07:51.011)

Yeah, you know, AI has been there for, you know, many years, maybe two decades, et cetera. You know, IBM has been investing in AI. Google has been investing in AI. You know, most of our companies do have some sort of insights, et cetera, et cetera. But the limits of AI is the human teaches the AI, you know, so that's the limitation.

Rupert Lion (08:09.454)

Hmm.

Rupert Lion (08:19.502)

Hmm.

Nagendra P Bandaru (08:20.995)

Now, to how much extent you can teach the AI, it'll pick it up. Now, if you teach, say this is cat, it'll remember for rest of a life, the AI will remember for rest of a life, but the human might have Alzheimer's and forget it, but the intelligent software will remember it for many periods. And because of computational power,

Rupert Lion (08:40.142)

Mm.

Nagendra P Bandaru (08:48.163)

it is able to do processing much faster and that is what the results are coming. So if you take web, web is the database. The internet is fundamentally the internet revolution. On the internet there is loads of data. Now there are two types of webs. One is the what you see the web.

which is you do e -commerce, you do on Amazon buying and shopping, you watch YouTube, the conversation with you and I are doing right now, there is an AI which is taking notes suddenly and it is transcripting. So I'm giving data to the AI, it is processing and it is putting it in an output. To answer your question, it is the amount of data that is available, and if you take internet there is huge amounts of data now the limitations of AI is that the human needs to teach AI you know the AI by itself will not learn yes it can process large amounts of data and give it to you back but the human needs to teach it somebody needs to teach AI and to what extent you can teach and what extent it can process it can process much faster based on today's technology that is available the infrastructure that is available now it cannot replace a human there are limitations for example I'm very emotional I'm very passionate I get angry AI doesn't get angry I can smile I can laugh yeah robotics there are robots which are being made to look like us they're being asked to be very emotional but at the end of the day the limitations of AI it is still not personal it is not emotional at the end of the day humans are social animals the AI can give you data and output the human is an emotional animal the emotional elements are still not there it is very rationalistic and this is very

Rupert Lion (11:09.838)

Hmm.

Nagendra P Bandaru (11:12.003)

what do you call more emotion coupled with rationality and sometimes we are irrational and that is what we call in AI hallucination because it is irrational also and it shows you wrong data so

Rupert Lion (11:26.766)

Yeah, it's an interesting one because it talks to the application of AI as well, because I think as a panacea for all knowledge and all solutions, AI is being thrown at pretty much everything you can think of. But there are a number of industries or applications where the human contact is important. And I think that emotional intelligence is lost. I don't know whether you in the course of your work or anything have come across some examples of those where the kind of emotional intelligence lacking is actually causing the AI to be a hindrance in a particular field or application.

Nagendra P Bandaru (12:02.531)

Definitely you know for for example for last many years we have been using bots in banking you know in contact centers in call centers you know for example today I'm traveling and about to board a plane and suddenly on 121 there's a huge traffic jam and I miss my plane I wouldn't want to talk to a bot or a you know artificial intelligence software I want to talk to somebody to help me get onto the plane and if I'm missing a baggage for example in an airport I wouldn't want to talk to a board I want to talk to a human to get my bags delivered to my home in any disruption you know humans are about experience and AI is also about experience and productivity and to me is that when it comes to disruption people want to talk to humans because they can solve faster they can provide personalized service you go to a restaurant I hate looking at electronic QR based menus you know I just can't get around my eyesight around that I need a physical copy. You know computers did not replace paper there are a lot of people like you and me who still read books and take notes

and the reason is you want to feel it you want to touch it and that is personal touch. Technology has limitations of personal touch yes Siri, Alexa and TikTok.

They all provide some sort of personal touch, but it is not like a person, a physical person. And that warmth, the hug, the empathy and the sympathy you don't get in AI.

Rupert Lion (14:16.494)

So, I think that's right. Let me ask a question though about almost, it's almost an ethical question. So when you said about missing your plane and wanting to talk to customer service, there's a moment perhaps where we're at a point in time, some would argue, where you would not be able to discern whether the person at the other end of that phone call or that message or messaging system is a bot or is a real person.

And do you think that if you can't discern it, that would be an argument for saying that it's essentially the same thing, number one. And number two, should that company be telling you that it's not a real person? Because that's important to you.

Nagendra P Bandaru (15:02.531)

Yeah, I know the good news is that nations are regulating AI. If you take the US as formed regulation, Europe, the European Parliament has formed AI policy and regulation. The US formed AI policy. Every country is forming AI policy. The enterprises are having a responsible AI.

Charter they are creating enterprise policies and if you look at one of the recommendations or the compliance requirements is that if you are using AI You need to call out by saying like human by saying hey this message is from Rupert and likewise you need to call out this message is from a bot and So the other person understands that the bot is speaking and or the board is relaying the message. For example, you have on WhatsApp today, Meta integrated AI, you know, some messages will come from the AI and it should be reflecting saying that it is led by the board. So already regulations are in place from the ethical validity of it. And I'm sure nations and companies,

We'll start regulating here.

Rupert Lion (16:31.63)

I mean, the cynic would say, unfortunately, the globe doesn't operate as a globe when it comes to things like that. As you'll know, you've got Europe bringing in all of these applications of regulations where there's actually relatively less movement in terms of progression of AI versus, for example, United States, where there's, well, essentially no regulation, but a lot of movement within AI and progression in that technology. So I think that the cynic would say, as long as it's unbalanced and we live in a global community, you'll always be accessing systems and platforms that are advanced in some countries, but unregulated. And you probably won't even know. I mean, a lot of people in Europe are using digitally native platforms that have existed and been born in and grown in the US. So I think, I do think that the ethics one has still a ways to play out, I suspect. And I wonder, maybe you could talk to...the kind of geographical point when it comes to the fairness of progression of technologies. So I think that's also something that perhaps people are concerned about. There's an unfair advantage when there's less or more regulation balanced with how fair it is to the consumer in terms of how their data is being processed or all those sorts of things.

Nagendra P Bandaru (17:47.203)

Yeah, of course there is regulation and there is also social responsibility of everybody. You know, if you take for example, some people might argue that Snapchat is bad. Some people argue that TikTok is bad. Some people argue within web, there is open web and an under web, you know, and nobody's regulating the under web. You know, all the hackers that are sitting somewhere and hacking, through the end of it. So definitely regulation will play its part and nations will come together, will foresee the regulation that has to be regulated. But I think as companies, as individuals, we also need to be socially responsible. You know, when we are using software today in real estate transactions, there is a lot of fraud. And today if you...listen to Warren Buffett's AGM yesterday which ran for five and a half hours. He says scamming is going to be the biggest industry. Now in any real estate transaction today, there is so much of phishing of emails and people lose a lot of money. Now fraud,

social responsibility, these are within humans. You know, we need to take care of each of these. One is regulation and second is civil society needs to play a significant role in being socially responsible.

Rupert Lion (19:16.534)

Yeah. And so I can see that it'll be, it's likely to find a way to being solved. I think we're just in that moment in time where everyone's off in different directions. We don't quite know how it comes together, but let's change tack for a moment. So we talked a lot about the kind of the broader scope of AI and kind of where it comes from, what it broadly is, is, is doing and should be doing to compliment our lives. And we've obviously talked about the ethics, which is quite a kind of a To an extent a philosophical component to it as well Maybe we could go a little bit granular in terms of our kind of our daily lives and daily operations whether in the workplace or personally What have you seen in? Market that's interesting tools or use cases which make people's lives better easier more effective I guess more edifying however you want to describe

Nagendra P Bandaru (20:09.347)

No, I would say the most dramatic shift I talked to you about right in the beginning of this conversation is in drug discovery. Today, you know, diseases are becoming more and more as much as AI is technologically changing exponentially, technology is moving exponentially, diseases are also moving exponentially.

Rupert Lion (20:18.99)

Hmm.

Nagendra P Bandaru (20:39.651)

and the healthcare costs are increasing. There are so many doctors and so many nurses and so many hospitals. There are a lot of places where people require medicines and there are different types of allergies, viruses, you name it. You know, disease management by itself is a challenging one. I see a dramatic change in the drug discovery because of AI and I see life sciences playing a very critical part in the lives and saving lives in making sure

that we get good medicines. Today Alzheimer's has no cure, cancer has no cure. So there are many diseases where you see we will require drugs and I foresee the acceleration of drug discovery and at a much cheaper rate, you know, because you'll be able to efficiently, you don't need 18 years to discover a drug, you'll need two years, you know, to discover a drug and therefore the cost of healthcare and the cost of medicines are going to go down. But if you look at, for example, you know, you take countries like United Kingdom, there is tremendous amount of shortage of dentists, doctors. If you need a knee surgery today or a hip surgery today you have to go to go to countries like India to get your knee surgery done and hip surgery done. In the United States you have a problem of insurance there are a lot of underinsured who don't get insurance to go for those big surgeries so the integration of robotics AI will accelerate you know surgery faster for example I can get root canal done very very quickly you know people who are balding can get you know their hair transplantation very very quickly you don't need the expert to point so many hair follicles on your head today robotics with AI combination can quickly plant hair transplantation today you can you can do hip surgeries

Nagendra P Bandaru (23:07.043)

and knee surgeries and knee cap surgeries along with robotics and AI very, very quickly. So life sciences, the healthcare industry, already you see tremendous amount of applications. Secondly, education. You know, we have less a number of teachers today. We have less a number of teaching assistants today. Today, AI through software will be able to relay a lot of courses. You don't need to get an undergraduate degree. In many vocational courses, you already see on YouTube the amount of DIY videos that have been generated, crowdsourced, et cetera. You see TikTok as a learning platform, which is AI generated again, which is a deep learning platform. So the applications are already starting to exponentially raise.

And my view is that it is only going to, you know, AI with a combination of robotics, augmented reality, you know, spatial intelligence, for example, where you are sitting and where I'm sitting, I should be able to exchange notes very, very quickly electronically and which is there already. But, you know, dynamically changing notes, exchanging notes.

we should be able to do. And my feeling is that some of the applications are going to improve our lives tremendously.

Rupert Lion (24:51.726)

So I think it's interesting because one of the things that regularly gets talked about as a concern for AI would be this point around, we're helping to solve for training and knowledge and education, which is one of the things you've just talked about. The issue occurs when in order to make, for example, workplaces more effective by getting up that education ladder much faster using AI.

You can end up in a situation where people don't develop and progress to the point where you then need a human. And the classic example of that is always you look at law firms, people always talk about this, right? So great. AI can do what an associate up to the fifth year could do. They could do all of the right kind of refreshing of documents, legalese, reviewing, all those things. But then at the point when they get to a five year associate, AI can't do it.

Now that's all well and good because you could, in theory, remove a large proportion of that cohort and you wouldn't be having to pay all those young people salaries, et cetera. But the reality is, where do your law firm partners come from 20 years in time or 10 years in time? So how do we balance that gap between AI supporting knowledge, but also AI not supplanting knowledge?

Nagendra P Bandaru (26:14.531)

Yeah, you know, what happens is that what I...is there will always be an intervention that is required from the human because you're teaching AI all the time. It is a constant learning platform when it comes to AI. You know, you teach music, but when you ask, for example, certain notes to be played, it may not know and you have to teach it and you have to intervene it. It's like a kid.

who you hold it all the time until it becomes an adult and it becomes a mature. Even when you are an adult, you don't do everything on your own. You're dependent on others. Because the human intelligence, if you look at human intelligence, it is a collective intelligence. You know, if you take a doctor and a lawyer and an engineer, it's a collective intelligence. I can't, you know, construct a bridge on my own, I need 20 workers and it is collective intelligence. So artificial intelligence and human intelligence is a collective intelligence. It is a collective economy we are talking about. We are not talking about AI being very dependent. It's an interdependent world we are living in. And therefore it is going to be a compliment thing and it is not going to be an independent, yes, a large portions of work or productivity we can achieve through AI. For example, I don't have to take notes today in our meeting. I don't need an assistant or a chief of staff to take notes. Today, AI can transcript. Microsoft Teams has got very good transcription capability. So it is collective intelligence.

Nagendra P Bandaru (28:15.011)

My belief is that it is going to be collective effort. It is not like one or the other. It is not mutually exclusive. It is going to be collective intelligence.

Rupert Lion (28:26.094)

But let's talk about once you have the knowledge and once you've got the right tapestry of AI plus people to deliver on that knowledge and to process it, who makes the decisions? Because that's something also people are very concerned about. When does it almost become self -aware? Let's think about Terminator 2 and Skynet for a moment. Does the machine start to be the master of us as slaves or is that just a complete...non -issue.

Nagendra P Bandaru (28:57.379)

No, it is very interesting that even human doesn't make decisions. Tell me how many times you have done something without talking to your wife or children. You know how many times, yeah, you know even to buy a small thing like your trousers or your shirt, you always ask somebody else's opinion before making a decision.

Rupert Lion (29:11.182)

plenty of times.

Nagendra P Bandaru (29:26.115)

You know, you want to go to a doctor, you ask for several references before going to a doctor. You want to go to a barber, even to cut your hair, you'll check whether the person is the right person or not. You know, today, if you have to go to a restaurant, you see the number of people giving ratings, and you see the ratings are good or bad, right? So the opinions of others matter.

So when you're leading with both human intelligence and artificial intelligence, no company which is developing software will make decisions on your behalf. It will give you insights faster for you to make decisions. For example, Samsung has just launched a fridge whereby it will tell you what vegetables are getting replenished on the fridge template. You go to Costco today, there is a latest Samsung fridge which will tell you the milk is getting older You know it has got a conversational assistant on Samsung fridge today saying the milk is getting older It will give you a menu of things that are there in the fridge that it can recognize already but it doesn't make a decision. It gives you the insight. You don't have to open the fridge and search all the vegetables. It automatically gives you a list so that you can quickly make the decision to buy the carrots or the milk very easily. So, it AI will give you the insights faster, the human will make the decision, the human also won't make the decision, it will ask three other people for a collective intelligence to come by and then it will make the decision.

Rupert Lion (31:22.19)

Okay, so I guess in theory you would distrust the fridge as much as you distrust your roommate from 20 years ago who said the milk was fine when it really wasn't. Something along those lines.

Nagendra P Bandaru (31:28.839)

I'm going to go ahead and close the video.

Nagendra P Bandaru (31:33.603)

No, definitely, you know, for example, in today's world, you don't, you know, you cross verify, you check all the time. You know, definitely when you get a message saying your Amazon order is on the way, you will check whether it is Amazon order or a phishing email. So, you know, your WhatsApp could be stolen with Rupert's face. You know, you will check whether Rupert…

Are you really asking me $2,000 today? So the amount of cross verification that is going on in today's world is amazing. And therefore, the balances, the checks and balances will automatically build. Technology today is already creating a lot of problems, but we have created checks and balances already. I'm sure AI with AI, also the human will create checks and balances.

Rupert Lion (32:36.014)

I guess it's the inevitable progress of mankind. We always think it's scary, but the reality is it always forms itself into something that has natural checks and balances.

Nagendra P Bandaru (32:44.643)

But the humans are also going back to the old days, some of them, you know. So definitely they'll always be going back to the roots. You know, there are people who don't look at their mobile phones. There are people who don't use iPhones. There are people who don't use any apps. There are people who just leave the phone and go to a mountain.

So obviously the reset will always happen. There will always be checks and balances. So yeah.

Rupert Lion (33:15.33)

Yeah, and that's good. And so, so I think before we kind of before we sign off, I guess I have one one last question that I sort of like I always like to level guests, which is, what's your one, one key takeaway, your one thing that you want the listeners to remember about AI?

Nagendra P Bandaru (33:39.427)

it's like having intelligence at your hands you're having another brain so you will enjoy it as much as you do you use it rightfully you'll enjoy it you know if you don't use it rightly you won't enjoy it so it is another brain let's say it is another micro brain

Rupert Lion (34:07.822)

So in the words of Spider -Man, with great power comes great responsibility, I think is probably the tagline there. Well, listen, Nakedra, it's been an absolute pleasure speaking with you on this. I think I feel very enlightened. I feel very enthused as well. You're very optimistic about AI, which is encouraging and exciting with all the stuff that's going on in the world today. And I do hope, and I think…

Nagendra P Bandaru (34:11.939)

Like in the yes spider -man with great power comes great responsibility

Rupert Lion (34:33.614)

particularly on the life sciences side, I think that's a hope for mankind. That's something that we should all be excited about, not least for us in developed worlds, et cetera, but also given the reduction in cost to develop these things, it's gonna help a lot of people who previously would have no access to being supported in less developed parts of the world. So super exciting to have gone through a lot of that. I think, I'm excited to…to kind of hear more as the AI journey develops and as your journey with AI develops. But for now, I just want to say again, thank you on behalf of the listeners and myself. It's been an absolute pleasure speaking with you and I appreciate your time and I hope the flight wasn't missed in the end or at least AI can help you.

Nagendra P Bandaru (35:19.171)

Thank you Rupert for inviting me. It's been a pleasure talking to you and I hope the listeners enjoyed our conversation.

Rupert Lion (35:26.926)

Great. Thanks, Nagrenda