Hey, and welcome to Chatbots: Your AI Allies.

In this, we're just going to run over what chatbots are – the difference between a fundamental, traditional chatbot, and then what actually AI can do inside of chatbots. What you can plug in? How you can increase your efficiency, make your chatbot better? How you can make it more seem like a human? Basically all the things that you'd want to create, like Jarvis from Iron Man within your chatbot, right? But we're going to learn what they are, where they came from first so you have a really good understanding of how chatbots are in our lives. What we've done with them? How they even got here? And actually, you're going to learn a couple of things, probably about how old they are. So stay tuned for that.

Again, what we're going to do is we're going to run through what is a chatbot. We're going to talk about the traditional formulation of algorithmic-driven. Then we're going to talk about AI-driven. We're going to talk about the core technologies powering these AI chatbots. How they're available? How you can make them? What you can do?

Talk about the evolution of AI chatbots. How we actually got here? And then we're going to talk about the era of AI chatbots – meaning we're going to define what they are. We're going to talk about how we got here. And then we're going to talk about where we are.

Then I'm going to give you some real-world examples of how we're using chatbots and AI.

We're going to talk about the challenges and the ethical considerations around chatbots because there's a lot of stuff to think about that you may not even put in your brain right now. So hopefully we're going to take a second, take a step back, look at what AI actually means in the context of chatbots. How we can ethically and morally insert AI for efficiency while not replacing humans? And making sure that other humans know they're interacting with an AI and not interacting with a human. There's a gray area there. We'll talk about that.

And then we're just going to talk about the future landscape of chatbots within AI. What does that mean? Where are we going? What's going to happen when this thing actually can think and answer questions, stuff like that? No one knows. It's also a position not to be scared or anything like that but we're just going to look at the future landscape. We're going to see what's going to happen and ask the question. Talk to the AI itself and see what AI thinks is going to happen."

What is a chatbot? Pretty simple. A chatbot is basically a set of instructions that mimics a human conversation. So why a business should consider a chatbot? What going to happen if you install a chatbot on your website, right, for instance?

First and foremost everyone's going to think about is 24/7 availability – meaning that you have an agent representing your company at any time. So if that agent has the ability to take orders, for instance, you can sell 24/7. If you have bespoke FAQ question that people need to get answered to or something like that, it's on at all times. And you only pay for it once and it doesn't take sick days and it doesn't complain.

The second part of that is increased in efficiency**.** At all times you have an agent so if someone calls out, you can just have that running or in the background. If the agent is busy, your chatbot can take over.

The third reason, which is the enhanced customer experience – meaning if I have the ability to ask a question to a chatbot versus trying to search it on your website or read or something like that, it's just a better experience for me. So it allows me to interact with your chatbot maybe on social media and then that leads me into the website where the chatbot still is. And I can interact with that same agent which got me on Facebook or Twitter or something. And now I'm still chatting with that agent because it was still always the agent on your website.

The fourth is data collection. It allows you to get novel inputs from your users, real-time users that you would never be able to get without them having the ability to input. So just giving them the ability to actually input to chat, you get data that you wouldn't otherwise get. That's just kind of ipso facto, right? Beyond the fact that people will offer way more information while they're frustrated than they would to like a salesperson asking them. So you get the double benefit there cost savings. Obviously, labor cost which is part of the ethical and moral considerations we'll talk about in Lesson 5.

Lead Gen. If somebody comes in and starts asking like enterprise questions or buy questions into your bot, that bot can automatically route them to sales or into a sales process which is another bot whichever you want. But if you don't have that bot there, you'll never have that lead.

Personalization. You can remember that person and talk to them in the future based upon their preferences in history with that bot. That's the intangible competitive advantage of having something that your competitors don't. And getting in AI when your competitors don't. Also, it'll allow you to be able to be the company that gets AI.

So, like, Zappos was the company that sold shoes online. Every one of their innovations was just kind of accepted because they were the company that sold online. They weren't just like the shoe company. So, like, if Payless Shoes started doing all this efficiency and cutting people, people would look at that a certain type of way but if Zappos does it, it's like, "Oh, they're the online company. Okay, I get it." Your perception matters. In that case and part of being the Chief AI officer is letting the C-suite understand this is the competitive advantage of being the company that gets AI.

So, according to Mark Cuban, AI, deep learning, machine learning, whatever you're doing, if you don't understand it, learn it because otherwise you're going to be a dinosaur within three years.

So part of your whole job as the Chief AI Officer is getting people on board with this, understanding this, and saying, "Okay. We have chatbot, but we need to really build this. Okay. You have this algorithm-driven thing, but we need AI-driven. We need to upgrade. Or if you don't have a chatbot at all, we need to build a traditional one to be able to get to AI."

So again, what is a chatbot? It's just a software application designed to simulate human conversation. Anything that has a natural language input and gives a natural language output is chatbot. They've been around forever. We'll talk about that in the next lesson but a traditional one is an algorithmic-based rule set. So it takes a certain input, certain words, certain phrase, maybe even a certain context, because you may think like, segmentation of natural language is a new thing. It's been around for 20 years. I was learning this stuff when I was first in college in 2000. So this stuff has existed forever. It was difficult and hard to deal and people didn't really see the value in it.

Now with AI, you can actually micro train it and do it super fast.

So it's not like these concepts are old and you're going to look at segmentation data for emotion or building an ideal customer profile out of segmented data. That's traditional stuff that chatbots could do. It's just very difficult time-labor-intensive that doesn't really move the ball forward because you didn't have the ability to handle novel or disparate inputs. So as much as you could predict, you'll never be able to predict a human, the inputs that the humans were giving.

You wouldn't continuously have to be building this thing at all times. Like you would have to be training and learning. You'd have to have a full time chat person or team of people to build out this like incredibly complex rules because every time I came in and I gave it some kind of different input, that would be a new rule to follow, right? You would have a new path because a period and an ellipsis are different. Every variable has to be scrubbed and then looked at. It's a massive project and no one wants to do that.

And there was never really a reason to have a machine learning process do that because one, people were spending their time building AI. And two, the people that could be doing this had better things to do with their time.

So now you have AI which is the answer to all of this because it can do this in a fraction of the time, in an order of magnitude faster. And it can do it with people that now have the ability to do it and see the reason to do it without actually understanding how. So you're giving the tools to the people that would want to use it, and you're removing the barrier of entry to it by adding AI. So you could start giving natural language processing and machine learning stuff that would take years to build and would never be maintainable. The AI already has this and can train it. So you take all of your chat data that you've ever had and feed it to the AI. And based upon the past, it can predict the future.

So that's the beauty of the AI. That's the beauty of the AI chatbot. That's the beauty of the ability to tag the AI into this. It can start actually predicting the future based upon the past. And you can start saying, “Hey, I need to create seven more agents of myself. So I'm not busy and I can actually replicate and run. So black Friday is coming on e-commerce, I need to replicate myself. And we need to build out an order taking bot. And then I need to build out an email bot and then whatever that is.” Without AI, you're not going to have that. It's not going to go and determine patterns from your previous inputs.

So it can also come in and start looking at like emotion segmentation and saying, “Hey, your people are getting frustrated after eight seconds interacting with me. I need to get faster. I need to answer questions faster.” That kind of level of segmentation didn't really happen before because no one wanted to build it with AI. It just happens continuously at all times – feeding and learning. And you can tweak it as you move forward. And you can say, “Okay, optimize for speed instead of efficiency of answer. So meaning don't be so pedantic that you have to be right. Just give a general answer and see if that works. And if the user is satisfied with that dumbed down, quote unquote, “the answer” so you can go faster. Don't go so like, I have to be correct, right? Like, be conversational.” It doesn't understand what that even means until you start training it.

And then once you start training it, you've gone from like, “Oh, my person is upset after eight seconds” to the answers in two seconds. And now everyone is awesome with this and they're happy. You can start optimizing for answering within that realm of speed.

What are the differences between a traditional AI chatbot? Adaptability, unlimited complex ability, the ability to vary your response.

So I can ask you the same question and get a varied response. In a traditional algorithmic rule-based system, there's no way you could possibly do that because it just sees what is the capital of France, Paris. That's it. Those are the rules. You can't really vary within that because it's chaos. You need rules. Within AI, it has those rules. It has the ability to grenade within a certain ability, right?

So you can grenade from zero to one. And it can say the capital of France was Marseille until this time, but now the capital of France is this. And then the next time you answer, it just says, “Hey, the capital of France is Paris, but there's also a town in Ohio called Paris.” Isn't that funny?

You'll never get that from a rule-based. You'll only get that from AI because it has the ability to kind of play jazz. It's not sheet music. It's just tempo and timbre and it's generally within these notes play this music, whereas traditional is an orchestra. It's very clear what music the violin plays, what music the trumpet plays. And if you go off beat, everyone else is broken. You can't. You have to go after this. But it works perfectly if you need the symphony. If you have the rules and you're expecting a symphony that works great. Throw AI into that and you can start playing jazz.

Those are the differences. And hopefully that makes sense.

So what did we learn? We learned what a chatbot is. We learned why a business will use a chatbot. We learned the difference between a traditional algorithm with chatbot and an AI-driven chatbot and why you'd want to use AI in the current context.

And what we're going to come up to is in Lesson 2, we're going to talk about the history of chatbots. And I'm going to take a second right now. What year do you think the first chatbot was designed in?

If you didn't say 1966, then stay tuned. The next lesson is going to blow your mind. We'll see you soon.