

Episode No – 13
Artificial Intelligence & Speech Recognition

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(Opening part of the Title Song)

Narrator-I :- Hello listeners! Welcome. We are here with the thirteenth part of the Science Serial “Welcome to Tomorrow” popularly known in Hindi as ‘Aane Wala Kal’.

Opening part of title song/music continue

Narrator-II :- In this part you will listen about the AI and Speech Recognition. According to a study done in 2019 by Capgemini, 74 percent of the digital service users depend on their voice-based assistant to search or buy some products and to create a shopping list or check out orders.

Music part of title song continues under Narration

Narrator-I :- Now, we are familiar with Siri, Alexa, Echo, and Google Assistant. Have you ever wondered how these digital assistants understand your questions, and how do they determine what exactly is our question?

Narrator-II: - The answer is that your voice assistants use the speech recognition technology to determine what you are asking them to do.

Narrator- I: - From your smart lights that turn on or off on your command, Google Home Assistant that can place space trivia with you and make financial transactions when requested, Alexa that can place your grocery order and call a cab on your behalf, automobiles, refrigerators, and washing machines that follow your voice commands, it is all due to the speech recognition component of the system that makes it possible.

Music part of title song continues under Narration

Narrator- II: - Natural speech recognition processing is a technology used to aid computers to understand the human’s natural language. Through the use of Artificial Intelligence, such machines have been designed to understand the process of human communication.

Narrator – I:-- Voice or speech of a man has its own recognition. Somehow it is also related to his or her personality and identity. Voice is mirror of a man behavior and his attitude.

Narrator-II: - We take you to the wonderful world of Artificial Intelligence. This is becoming a part of our daily life. Have you ever given a thought that your smart phone, laptops, vigilance cameras are pooling and collecting our personnel and private information in the form of data?

Narrator- I: - Once again, we welcome you in the new world of Artificial Intelligence. To know more please be with us for next half an hour.

Part of the Title Song Continue

Participants: -

1. Prof. Vivek---- (Expert of Artificial Intelligence)
2. Dr. Pratibha ---- (Lecturer and IT Expert – Prakash Mother)
3. Prakash ---- (19 yrs, College student/ In the role of Jamura too)
4. Ravi ----- (21 yrs. College student/ in the role of Madari too)
5. Krishan ----- (22 yrs, student & in the role of spectator)

Scene: - *A middle class family home, TV is in the drawing room, pressure cooker & kitchen effect etc.*

Dr. Pratibha: - Prakash, can you start the TV, to see the news headlines?

Prakash: - Mummy, I just shut it. No special news is there. On all channels same negativity and political leg pulling.

Dr. Pratibha: - Yes, you are right. These private channels forget about the society and the unity of the nation. Their attention is only on their TRP.

Prakash: - Mummy, we are living in a world of competition. Who cares about the welfare of the society and the unity of the nation?

Dr. Pratibha(laughing); - Vow, now my son is becoming mature.

Prakash: - By birth, I am genius. Being a mother, you fail to recognize this genius (Laughing).

Dr. Pratibha: - My son, this is genetic effect. A genius son of a genius mother

(Both are Laughing very loudly)

Prakash: - OMG, I forget to start the TV.

Dr. Pratibha: - Prakash, on last Sunday you were telling about some competition. What happened? Is it over or yet to be finalized?

Prakash:- Mummy the final date is yet to be finalized.

Dr. Pratibha:- What will be the theme of the competition?

Prakash:- We suggested many topics...but....

Dr. Pratibha:- Can you elaborate a little bit about the topics?

Prakash:- Such as environment, pollution, digital divide, non-conventional source of energy etc.

Dr. Pratibha:- My son, though these are evergreen topics, but difficult to add some new innovative ideas.

Prakash:- Mummy, the same thing has been pointed out by our sir. Our team is giving a second thought on it.

Dr. Pratibha:- Prof. Vivek is very innovative. Have you consulted him?

Prakash:- He asked our team to select new subject and try to implement innovate ideas in it.

Dr. Pratibha:- It is common problem with all innovators(Laughing).

Prakash:- Just like my mom (Laughing). First tell me to start the TV but now busy in her routine works.

Dr. Pratibha:- Morning news refresh our mind.

Prakash(Laughing):- But for me the ongoing birds song is the most happening event of the world.

Dr. Pratibha:- Birds are also innovators in their own world.

Prakash:- Mummy.....They know each other's language and can recognize voice too.

Dr. Pratibha:- It looks as their music is coming from a super computer(Laughing).

Prakash:- What a great harmony? In drama performance, even our team can't defeat them.

Dr. Pratibha:- My son, if our smart phone and super computer can recognize speech and voices, then why not the birds? They are living creatures.

Prakash:- Well said. They are product of Almighty's computer (Laughing).

Dr. Pratibha:- Correct...My hint was also about AI & Speech recognition techniques.

Prakash:- Mummy.... I don't understand.

Dr. Pratibha:- I was talking about speech recognition techniques.

Prakash:- Vow...Understand, one of my friend, do his home works and project works with the help of this technique.

Dr. Pratibha:- He is adopting shortcut in life. Being a teacher, I am not in its favour.

Prakash:- Yes mummy. His homework's and projects are full of with grammatical mistakes. Our sir asked him not to repeat all these, but he never cares for it.

Dr. Pratibha:- Careless fellow!

Prakash:- Though he is cunning but on stage his performances are super.

Dr. Pratibha:- At least he is doing good in the field of his interest.

Prakash:- He was saying that he gives dictation to his computer and my work is finished within minutes by the software.

Dr. Pratibha:- The modern days Apps are new innovation.

Prakash:- Mummy, I read somewhere that the valuation of some Apps is in billions.

Dr. Pratibha:- This is monetary valuation not of the Apps but of the innovators.

Prakash:- What about our morning tea? We are too busy in discussion to forget for our tea.

Dr. Pratibha:- No...we are not late. Here...the talent of Pratibha will work to have excellent tea for her son (Laughing).

Prakash:- Mummy let me have tea for you. I am going to prepare it.

Dr. Pratibha:- Vow! For the first time some good job by my prince. But keep in mind the difference between salt and sugar (Laughing).

Prakash:- Don't worry mummy. My innovation will be full of taste.

Sound Effects cups/plates etc

Prakash:- **(From distance)** Mummy here is your morning tea and some tasty snacks.

Putting cups and plates on table

Dr. Pratibha:- Vow! What a great taste! Super son of a super mother. (Laughing).

Prakash:- Mummy, please raise the volume of the TV. There is some news on AI. May I have some Artificial knowledge along with my real one.

Dr. Pratibha:- Vow! This is a wonderful subject. I was telling about the same subject.

Sound Effect of News reading on TV

Prakash:- See the caption! Global Meet on Artificial Intelligence.

News Reader:- Now in details, " On coming Sunday the Prime Minister will inaugurate the three days World Global Summit on Artificial Intelligence. This will be a virtual conference of its own kind. About two dozen world renowned experts will participate in it.

Prakash:- Mummy, AI is Prof. Vivek's field. He may also participate in it.

Dr. Pratibha:- My son, we are heading for a virtual world. COVID-19 has changed the way of thinking throughout the world. Even a common man can also get himself registered for it.

Prakash:- Vow, then our team members are also going to registered for it. I am calling my friends.

Dr. Pratibha:- First you should have the address of the website.

Prakash:- Don't worry. PM is going to inaugurate it, and everything will be available on 'mygov' website.

Dr. Pratibha:- (Laughing) They are one step ahead of us. Generation gap.

Sound effect of mobile phone

Prakash:- Hello Ravi!

(From other side):- Picking the phone. Yes Prakash, how are you? Any problem?

Ravi:- Have you seen the news on TV.

Ravi:- No, what happened? I am least interested in TV news. I refresh myself through online news portals.

Prakash:- Is there any interesting news?

Ravi:- Only one news for our purpose and that was on , 'Global AI Summit'

Prakash:- What a thirsty man needs? Only a little bit of water. Our wavelength is very much similar (Laughing).

Ravi:- There is a saying, ; Where there is a will ,there is a way'

Prakash:- My dear throughout the world, there is one and the only one wish. Let's have vaccine for the COVID-19.

Ravi:- The whole world is of the same desire and people are waiting eagerly for it. If it was not COVID, then the summit might have been organized in the Vigyan Bhawan.

Prakash:- OK. I called you to reach at my home as soon as possible. From here we shall proceed to Krishan's house, so that we can have future planning about the Street Drama.

Ravi:- This will be good. OK, I am keeping my phoneBye.

Prakash:- OK Bye...

Sound Effect of mobile phone

Dr. Pratibha:- Prakash are you free? Always a lengthy talk among the friends. What were you talking? Everything is fine.

Prakash:- Mummy, I was telling about the Global Summit to Ravi

Dr. Pratibha:- Why you have second thought. Go ahead and get registered for the same. Neither you have to leave the home and neither to spend any penny. Two birds with one stone. Better to wash your hand in the water of holy Ganga.

Prakash:- Yes mummy, my friend, Ravi is just arriving and after that we are going to Krishan's house to have our future planning.

Dr. Pratibha:- My son, there you will find prof. Vivek. He is expert of AI and will guide you better.

Prakash:- Yes mummy, that is why Krishan has asked us to arrive at his home, so that we can have common discussion with his papa. Today Prof Vivek is available at his home.

Sound Effects of doors/call bell

Dr.Pratibha:- Prakash, see who is there?

Prakash:- Mummy, the sound of bike indicates that Ravi might have arrived.

Effect of door open

Ravi:- Hello dear!

Prakash:- Ravi, your speed can beat even the supersonic missile and super computer (Laughing).

Ravi:- My dear, the world is proceeding from super computer to Artificial Intelligence. Am I right?

Prakash:- Ravi, nobody can beat you in discussion.

Dr.Pratibha:- Hello Ravi, come inside. Why all discussion on the door?

Ravi:- Good morning aunty. Are you fine?

Prakash:- My dear, my mom is super and she is most talented among the talents, that is why her name is Pratibha (All are Laughing).

Dr. Pratibha:- No more jokes. Ravi, will you like to have tea or coffee?

Ravi:- No aunty, I am fine and already had my heavy breakfast.

Prakash:- Mom, Ravi is on dieting these days. Instead him, I can have double breakfast (Laughing).

Ravi:- Aunt, though we can have information on AI in the Global Summit but you are also guiding your students in your college.

Dr.Pratibha:- That is right Ravi.

Prakash:- My mom directed the street play of her college last year and that play won the first prize at national level.

Dr.Pratibha:- Hello children, AI is very vast subject and if you desire to have your skit on it, better go for some sub theme on AI.

Prakash:- Mummy it will be better to take final decision after the Global Conference. There we will come across so many subjects.

Dr.Pratibha:- Even you can decide your subtheme after discussion with Prof. Ravi. He is subject matter specialist.

Ravi:- Aunty Ji, What are your views on it?

Dr. Pratibha:- You can have so many subthemes. You can go for Speech Recognition and AI.

Ravi:- You mean Artificial Intelligence and Speech Recognition. Am I right?

Prakash:- Correct (Laughing).

Ravi:- Aunty, before we have some discussion with Prof. Vivek, we would like to know more.

Dr. Pratibha:- You might have learnt about smart offices and smart homes. Such technology works on the modulation of sound and speech.

Prakash:- You know that fellow, I mean Mr. Agedi. He does his homework and project works with the help of this technology. That is why so many mistakes in his work.

Dr. Pratibha:- The mistakes may be due to pronunciation defects. But with certain setting in the system, he can improve all these mistakes. Actually, speech recognition works on the understanding and analysis of sound effects.

Prakash:- Mummy, we are going to be late.

Ravi:- That will be good. OK...Bye aunty.

SCENE CHANGE: - Krishan's house, Prof. Vivek is working in his room, light music in the background.

Ravi:- Prakash, call bell is that side.(Effect/door open)

Krishan:- Hello dear! I am waiting for you since half an hour.

Ravi:- At Prakash's home, we have some discussion with her mother.

Prakash:- Krishan, already we are late, first we have our meeting with your papa. He can guide us better.

Sound effect of footsteps

(In one voice):- Good morning uncle.

Prof. Vivek:- Good morning, young friends. How is life going?

Ravi:- Uncle, being an expert of voice & speech, you can tell better (Laughing).

Prof. Vivek:- Such question can only be raised by your generation. But software of my mind says that there is some confusion in your mind.

Prakash:- You are right uncle and that is why we are here to solve our problem.

Ravi:- Sir! To create technical and scientific awareness among the masses, our team is preparing for a street play to be played at different places in the city. Topic can be AI or on related theme.

Prof. Vivek:- Idea is good. What next?

Krishan:- Papa, our team is confused on which theme, we have to prepare our skit and play.

Prof. Vivek:- Ravi, what was your first question?

Ravi:- Regarding speech recognition.

Prof. Vivek:- Correct....Laughing.

Ravi:- Prakash's mother, I mean Dr. Pratibha is also of the same view.

Prof. Vivek:- Friends, this will be a good topic for your street play.

Ravi:- Sir, in speech recognition, what are the main technical aspects?

Prof. Vivek:- Though there are no limitations of AI & Speech recognition and when we talk about street play then these boundaries become wider.

Krishan:- Papa ,our team members are also going to participate in the Virtual Global meet on AI. We can have many new information in that too.

Prof. Vivek:- That is good. But don't forget to cover recognition of specific person through his voice, automatic control system, I mean automation and also decoding technology.

Ravi:- Sir, we read that Facebook, Amazon, Microsoft, Google and even Apple have included this technology in their different products and software.

Prof. Vivek:- The technology has entered in its second phase. Slowly we are seeing changes in it.

Prakash:- Sir, our team is also entering in the second phase. I mean we are going from stage play to street play (Laughing).

Prof. Vivek:- Good... After so many restrictions during COVID period, people will be happy to see such play on the streets. People will try to come from their loneliness.

All are laughing

Ravi:- Sir, now we would like to take your permission. Thanks for your guidance.

Prof. Vivek:- Krishan, your friends are here, will not entertain them? They are here after long time. Let them have some sweets, snacks and fruits.

(In one voice):- Sir, don't worry for that. Krishan is with us. We shall have that.

(In one voice):- OK ...uncle...bye....Have a nice time.

Prof. Vivek:- O.K. Young men! Good luck and all the best.

SCENE CHANGE: - Post COVID period/ city street corner/ Traffic noise & car horn etc.

Madari (Ravi):- Meharbaan and Kadardaan! The Heaven is coming. Be ready to enjoy the Technology of AI. (Effect of small drumbeat.... In between). It is Sunday.... sun is bright.....sky is right team is Delhite.... Haa....haa....haa.....

Effects of drumbeat

Are Jamure.... Where are you? Am I right or left something?

Jamura (Prakash); - My Lord, don't worry. Your enemies are enough to be worried. "We are living in the age of technology..... Technology of modern age and we are enjoying fully.... Not enjoying today, will be enjoyed by our next generation. Corona has vanished and we are here to take you in a new world of Artificial Technology and Speech Recognition.

Clapping

Madari: - Jamura, you are super and master of masters.

Jamura: - My Lord, this is all due to you.

Madari: - Jamura...You are living in a new age, where brain can borrow from the machines.

Jamura: - My Lord, my brain is not mechanical. I got it through hard work and devotion.

Madari: - Jamure, keep in mind. Slow and steady wins the race. Meharbaan and Kadardan, am I wrong? (All are silent)

Jamure: - My Lordwhat a magical effects?

Madari: - Jamura...It is not magic, but effect of COVID period (Laughing). Use of face mask make them mum.

All are laughing

Jamura: - Their smile reflects the truth of COVID-19.

Madari: - Jamura.... "CHHOTA MUHA AUR BADI BAAT". Respect your elders and have friendly attitude towards the younger one.

Jamura: - My Lord! What I said was wrong?

Madari: - Jamure...remember, I can catch and recognize the modulation of any speech and sound.

(In one voice): - Voice and speech recognition wonderful.

Jamura: - My Lord, there is some murmuring (KANA PHUSI) from that side.

Madari: - Meharbaan & Kadardan..... What Jamura is saying?

Jamura: - My Lord! They believe that what you saying is wrong?

Madari: - Jamure! 'HAATH KANGAN KO AARSI KAYA'. Truth is truth and it can't be hidden.

Jamura: - (Laughing) Vow! "AB AAYA UNT PAHAD KE NICHE'. My Lord it is difficult to hide the truth. Gentlemen.... Do you want that my master should come forward to show his magical trick on speech and voice recognition?

(In one voice): - Yes that will be good. (Clapping).

Jamura: - My Lord! All are eagerly waiting for your magic. The magic of Artificial Intelligence and speech recognition.

Krishan (Spectator): - Artificial Intelligence... we heard this word for the first time. Does intelligence is also manufactured by the machines? Unbelievable.

All are laughing

Madari: - Why not? This is all due to my magical effect.

Jamura: - My Lord! We are living in the age of new technology and all these gentlemen are very intelligent. Be sure before proceeding, otherwise we will be caught red handed (Laughing).

Madari: - Jamura, you are right. This is not cheating but perfection.

Madari: - Gentlemen. Jamura is very intelligent and try to find mistakes.

Jamura: - My Lord! These are not mistakes but questions have been raised, which is basic principle of scientific awareness.

Krishan (Spectator): - The Jamura belongs to modern age generation.

Madari:- What...what.... The very basic question that I want to highlight through this show.

Jamura:- My Lord! I didn't say anything.

Krishan(Spectator/Darshak):- Where is your magic of speech recognition?

Madari: - Meharbaan and Kadardan... This is neither magic and nor the trick.

Jamura: - My Lord, time has come to raise the curtain. The public want to see the truth.

Madari: - OK... Wait...wait... You might have heard the saying, 'Slow and steady wins the race' "SAHAJ PAKE SO MITHA HOI".

Jamura: - My Lord no more waiting and truth should come forward.

Madari: - Fine Youngman. Let me take you to the world of AI and Speech Recognition. What you will say will be in written format... Not in written format as it will take time but in print form.

Jamura: - My Lord! Then why there is delay and for whom you are waiting? Let,s have the print of all the speeches that we have during this show.

Madari: - Wait..wait..... Let me have my mantra... "AAKDE KA BABRA....VIGYAN NE PAKDA.... TAKNIKI NE JAKDA"... This means... "These are the words, perfected by the science and caught by the technology'.

Krishan (Spectator): - Don't be over smart. We are not fool.

Jamura: - My Lord! No more delay. The public can't wait now.

Madari: - Jamura... Where is delay the print is ready.... See ...see...here in this box.

Sound effects of papers

Krishan (Spectator): - Vow! Same words that have been raised during this show. Wonderful.

Jamura: - My Lord, there is some murmuring behind your back. Many have doubt that the print was preprinted.

Madari: - Jamura, you are very intelligent to know the mind of the public. Meharbaan & Kadardan, you can believe and see the truth, please someone come forward.

Krishan: - Yes, I am here.

Jamura: - (Laughing) Will be caught red handed.

Madari: - Here is my magical machine. Truth will be reflected instantly. Gentlemen, no body know what he wants to say. Am I right?

Jamura (Laughing): - My Lord! What is true or wrong, God knows everything.

Here part of the film song can be used

Madari: - Here is the voice and speech reading of this gentleman, I MEAN KACHHA CHITHA.

Jamura:- Ustaad, 'Sachha Chitha Kyo Nahi'

Madari: - Jamura, what is true or what is lie, only he can tell. Please can you read it

Krishan: - Oh My God! It is hundred percent true. Magic.

Jamura: - Can your magical machine do some more wonderful tricks and magical stick?

Madari: - Jamura, it is not magical stick but a magical technology. If you feed some voice sample of a person in it, it can recognize the person.

Spectator: - In future, it will be difficult for the criminals to escape.

Jamura: - My Lord, there is some voice from that side.

Madari: - Understand, there are some inherent defects of this magical technique. Voice modulation, pronunciation, difficulty in speaking or fonatic defects may create some problem.

Jamura: - My Lord, the magical story is over or still left.

Madari: - My child, science and technology give birth to innovations and there is no limitation of it. More you go inside; more you will find.

Jamura: - Ustad, this is not my question but of that gentleman, whose voice is not clear due to cold and cough. What will happen with him (Laughing)?

Madari: - Meharbaan & Kadardan, Jamura is super. Question after question.

Jamura: - My Lord... Not questions but intention to know, I mean scientific temper

Ustad: - Jamura, every coin has two sides. Speech recognition technique has some inheritance problems. It can't be perfect in true sense, voice and fonatic problems may be there and external noise may create problem in speech recognition. Besides this there is a need to evaluate its implementation cost.

Jamura: - Ustad, your story is over.

Madari: - Jamura, there is message from Dr. Pratibha. She is here to guide us and answer your questions. Welcome to Dr.Pratibha.

Clapping

Dr. Pratibha: - Gentlemen! This skit and play were written and presented by our college students to create scientific temper and scientific awareness among the masses. New technology is entering in every sphere of our life. Speech recognition is also one of them. In a study, it has been found that in future, it is going to influence every part of our life and its market value will go in billions.

Google Home, Amazon ALEXA and Siri are very common. They can listen you, monitor you and even can answer your queries. Smart homes and smart offices are becoming common. For senior citizens and handicapped person, it will be a boon. In medical and health industry, it is playing important role in medical transcription.

Clapping

Krishan: - Dr. Pratibha, what do you think about – AI & Speech Recognition?

Dr. Pratibha: - Speech recognition is the process that enables a computer to recognize and respond to spoken words and then converting them in a format that the machine understands. The machine may then convert it into another form of data depending on the end-goal. For example, Google Dictate and other transcription programs use speech recognition to convert your spoken words into text while Siri and Alexa respond in text format or voice.

Jamura: - My Lord, can I have one question from Dr. Pratibha?

Madari: - Jamura, you are living in a democratic country, where freedom of speech is granted by the constitution. How can I restrain you?

Jamura: - Dr. Pratibha my question is, how Voice-based Digital Assistance Providers support the system?

Dr. Pratibha: - Intelligent question. These days number of consumers depend on voice based digital sustenance. It can immensely cut down the cost in fields like customer care service, front desk automation and voice-based digital assistants. Speech recognition capabilities are a crucial part of NLP models. Based on AI models, speech recognition becomes more accurate and makes it easier to identify and understand the components of natural language.

Jamura: - Ustad, what a great message! By pulling the curtain from the technique Dr. Pratibha has cleared all aspects of this technology in very short.

All are laughing

Madari: - Jamura..... arts, science and technology have no boundaries. Their aim is how to make our life happy and comfortable.

Jamura: - Vow! Smart knowledge, smart technology and smart Jamura.

(All are Laughing & Clippings)

Closing part of the Title Song/Music