

Episodes: 9
Gaming & Artificial Intelligence

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Artists/Participants:-

- 1. Dr. Harish (Professor & Expert - Artificial Intelligence)**
- 2. Vikas---- College Student (21 yrs)**
- 3. Abhinav --- Student (20 yrs)**
- 4. Mansi —Student (20 yrs)**
- 5. Rumba (Humanoid Robot)**

(Opening part of the Title Song)

Narrator – I

Hello listeners! Welcome in the second segment of Science Serial “**Welcome to Tomorrow**” popularly known as “Aane Wala Kal” in Hindi

Narrator-II

In the introductory part you listened, ‘What is Artificial Intelligence’? We also brought to you the basic information on Artificial Intelligence and its importance in our daily life?

Narrator – I

History of Artificial Intelligence and its current status was covered subsequently. Is AI going to be the next revolution? Still a million dollars question.

Part of the Title Song continue under the narration

Narrator-II

Now we are coming to the second segment, based on ‘Application of Artificial Intelligence’ in our daily life. What is Gaming and how Artificial Intelligence play role in it ? Please be with us to know more about all these.

Part of the Title Song

Scene—1

College/Institutional ambience, Parking site with buses/cars/scooters horn & sound effect, birds chirping/singing. Students’ noise etc.....

Sound Effect

Vikas:- (Murmuring): Oh! It is almost 10 O’clock.

Abhinav:- (With long breath):- Hello Vikas! Good morning. How are you?

Vikas:- Very good morning Abhi. Be hurry dear! The first period is of Professor Harish and you know his punctuality.

Abhinav:- In punctuality, he can even beat All India Radio (Laughing).

Vikas:- Be hurry Abhi, before Professor Harish arrives, we should be inside the class room.

Sound Effect of footsteps/ fast breathings

Vikas:- Thanks God. The classroom's door is open.

(Both Abhinav & Vikas Hurriedly entered in the classroom)

Mansi:- (Copying the voice of Prof. Harish). Hello students! Who permitted you to be in the class room. Punctuality means punctuality. Go and wait for next forty minutes (Laughing).

(In two voice):- O.K. Mam..... No.....No.... OK...Sir (All are laughing).

Mansi:- Cool down. Your Professor is on leave and no gape arrangement has been made by the Co-ordinator.

Vikas:- Vow! Abhi. Enough time to gossip.

Abhinav:- Gossip ? You forget your promise.

Vikas:- Oh! I understand. You Champion, can't beat me in chess.

Mansi:- OK, Gentlemen! Who is going to decide the game?

Vikas(Laughing): Oh! Great question. We have a machine to be our referee.

Abhinav:- Machine, which machine?

Vikas :- Yes Abhi, I am talking of a living machine(Laughing).

Abhinav:- Oh! Understand. You mean Mansi. She is perfect in chess and can defeat anyone.

Mansi:- (In higher tone) You called me machine. That is not good.

Abhinav:- Oh No !That was symbolic. Vikas is of the view that Mansi is perfect in her chess and can even beat the computer machine designed by Prof. Harish
(Laughing).

Mansi:- Let's complete our project work.

Vikas:- Mansi always work....work.... Let's have some brain storming exercise.

Mansi:- Project work doesn't fall under that?

Abhinav:- Vikas is talking something different. Look at his beg. There is chess box.

Vikas:- My challenge to Mansi in her favourite game.

Abhinav:- Vow! A challenge by a Champion to a Champion.

Mansi:- O.K.I accept Vikas challenge. The best place to play can be the Computer Lab.

Abhinav:- You should be extra careful. Vikas is practising hard since he lost last time.

Vikas:- Dear Abhinav, be neutral. This time I coached myself through a different technique.

Mansi:- What? New technique.

Vikas:- Yes Mansi. I gone through the Video of the game played between Deep Blue and Garry Kasparov- the world champion in 1997.

Abhinav:- Vow! You are moving to digital technology.

Mansi:- If it is so, let me through my own challenge. I have nothing to lose. If win that will be good and if lose then I am going to learn some new techniques.

Abhinav:- What a sportsmanship spirit? (Laughing)

(Sound Effects of chairs/desks/ door/ footsteps etc.)

Great ambience? Cool and peaceful environment to concentrate. Now you can have your brain storming session(Laughing).

Mansi:- (with surprise) Look that side. The great Rumba is there to monitor our activities.

Vikas:- Yes Mansi. Once Professor Harish told that Rumba is super intelligent. His team of researchers has created a software that make Rumba intelligent and smart.

Abhinav:- Rumba can monitor activities in the absence of Prof. Harish.

Mansi:- You told that Vikas coached by the video game of the event played between Kasparov and the Machine created by IBN.

Abhinav:- Vow! Our Rumba is step brother of Deep Blue(Laughing).

Vikas:- OK! Lets have our chairs this side(Effects of pulling chairs/desks etc). Abhinav you should be impartial and fair in your judgement.

Abhinav:- I can swear. OK! Here is coin. Girl first. Mansi, what is your choice? Head or tail.

Mansi:- My choice is always head and I am going with that.

Abhinav:- Look and here is the toss.....

(Effect of coin)

Oh! It is again head.....No.....No....No..... It is tail of Vikas (Everybody laughing).

Mansi:- Vikas.... Good luck and go ahead.

Vikas:- Thank you Mansi and I reciprocate my good wishes. Today you will find a different Vikas, groomed by Deep Blue (Laughing). And....and....this is my first run.

Mansi:- Very intelligent run. OK..... Without any loss of time I am taking my brave soldier to overrun your Sepoy.

Abhinav:- Vow! Brave Mansi. Well beginning is half done.

Mansi:- (With serious tone) This is not good Mr. Abhinav. Being a Judge, be neutral.

Abhinav:- Noted down my Lord!(In higher tone). I was neutral, am neutral and will remain neutral provided the winner promise a party (Laughing).

Vikas:- And without loss of time, my elephant.....No....no.... my brave horse have a cross jump to beat your elephant (Vow).

Mansi:- You forget to assess the situation. Here you have great warning from my Nazeer.

Vikas:- Intelligent girl. Now let me have my formula of double check. Vow, she can't escape. Look you are going to lose the game very soon. Here is the double check. Save your Nazeer or your brave Chetak (Laughing).

Abhinav:- No.....No... You can't run that way. Rules don't permit.

Vikas:- OK. Let me take this way. Again double check.

Abhinav:- Vow! What an interesting game ?

Mansi:- Vikas, your coaching is super. I defeated you thrice in this very game but this time you are doing magic. What a coaching by Deep Blue. But still my King is far, far safe to beat.

Vikas:- Wait and watch. After your Nazeer head in my hand, it will be difficult to save your King and no more wait, again a check.

Abhinav:- Mansi, very difficult to save the game. No escape route for your King.

Vikas:- It is matter of few minutes.

Mansi:- Vikas, I appreciate your play. Do you learn all these tricks from the gaming videos. This time I am seeing a different kind of Vikas. Congratulations.

Abhinav:- Without any hurdle, I hereby declare Vikas the winner of today game.

(All are Laughing)

Mansi:- Vikas I heartedly appreciate your play. Your moves were unbelievable.

Abhinav:- I had told you that Vikas is full of confidence. Like Super Computer, he is equally intelligent with super confidence(Laughing).

Vikas:- I was sure to win the game. When one see the recording, one can learn so many tricks.

(Door open & someone come inside the Lab/ footsteps etc)

Prof. Harish:- Good morning students. What a surprise to find you all in the Computer Lab?

A good place to learn and practise new things.

(In one voice):- Very Good morning sir.

Mansi:- But sir, it was our play and learn session, I mean learn while you play. Mr. Vikas challenged me and I accepted his challenge.

Prof. Harish:- What challenge? This is Computer Lab and there are set rules. Oh see!

Vikas:- Sir, we always try to observe the rules of computer lab. Actually I want to show my superiority that I have learnt from the Deep Blue of IBM.

Prof. Harish:- You mean the game played between Kasparov and Deep Blue.

Mansi:- Yes Sir! The very same game that proved that an intelligence machine can beat man.

Prof. Harish:- But I never told that Mr. Rumba has been trained in chess. In our lab, we have also develop a similar system and I am sure my Rumba can defeat any champion in chess.

Vikas:- Sir, I got the recording of the super games played between Deep Blue and Garry Kasparov. Some of the runs are unbelievable. After so many practices, I learnt some new tricks

Prof. Harish:- O.K. friends, I understand. Mr. Rumba is there to tell me what you have done and learnt? He is spy of this Lab and nobody can escape from his Intelligent eyes.

Mansi:- OMG. Mr. Rumba is third eye of this computer lab. Sir can we have one demonstration with Mr. Rumba?

Prof. Harish:- Why not? “Haath Kangne Ko Aarshi Kaya”(Laughing).

In one Voice:- Vow ! Thank you sir.

#####(All get up from their chairs & table and move towards Exhibit Hall of the Lab)

Abhinav:- It is on that side. Looklook....there.....

Mansi: - Hello Mr. Rumba! Good morning. Looking smart.

Rumba:- **(In distorted voice)** Good morning everybody. Being superior to your race, that is why I am smart and will remain smart. (Laughing...hee.....hee....hee)

Vikas:- Your performances in gaming is enough to support your claim.

Abhinav:- And what Prof. Harish told is enough to believe (laughing).

Mansi:- Hello gentlemen! No extra talks.

Abhinav:- O.K. Aarushi. Let's have some tips from Mr. Rumba.

Vikas:- Abhi is very serious.

Mansi:- Seesee... Professor Harish is coming this side.

Vikas:- He is very supporting to his students.

Sound Effects of footsteps

In one voice:- Welcome sir!

Prof. Harish:- Do you have your introduction with my Rumba?

Mansi:- Sir, I think your lab is super. It can compete any modern Artificial Intelligence Lab.

(In one voice):- Sir, all credit goes to you.

Clapping

Prof. Harish:- O.K, Please come to the point.

Mansi:- We want to have one demonstration of Rumba on Gaming and Artificial Intelligence.

Prof. Harish :- O.K.....Let me know..... How can I help?

(Sound effects of papers/murmuring etc.)

Vikas:- Sir, we want to have one practical session with Rumba.

Prof. Harish:- Young men don't worry. Rumba is going to depict his skill very soon. You can attend the presentation to know all that. For that notice will be put on the institute's website.

Mansi & others: - Thank you sir for your support and encouragement.

Prof. Harish: - Welcome . Now I would like to take your permission. Bye....

(In one voice):- Bye....bye sir.

Rumba:- Good luck and see you.

Abhinav:- Vow ! Wondaful. Sweet and typical voice.

Change over Music

(Scene:- Early morning, birds singing in the backdrop & Mobile bell start wringing)

Vikas :- (Response in half drowsy) OMG. It is 6 O'clock in the morning.

Abhinav:- (From other side) Hello....Hello Vikas!

Vikas :- Yes, Abhi..... Oh Yaar, I am sleeping, please don't disturb? What is matter?

Abhinav:- I have gone through the University website. There is an important notice. Prof. Harish is going to give his presentation on, “Artificial Intelligence and Gaming Industries.”

Vikas:- When, where and at what time?

Abhinav:- The presentation will be based on the research project of Prof. Harish and will be delivered today in college auditorium. Time is sharp 11.00 in the morning.

Vikas:- Thanks Abhinav for calling me. We should be there by 10.30. Please convey it to all.

(On other side of the phone)... O.K.Bye....bye....

Change over Music

Scene-III.... “College auditorium, student’s noise, footsteps, mike announcement/mike echo”

Sound Effect of Mike Adjustment etc.

Announcement :- Hello..... Hello! Are you getting me?

(From the Audience side) :- Please raise the volume.

Narrator:- Does my voice reaching to that last person? Yes....yes gentleman, I am talking you.

(In one voice):- Please raise the volume.

Announcement :- O.K.....O.K.. I get your point. Hello control room! Please raise the volume

Sound Effect of Mike Adjustment

Announcement :- Welcome you all on this historical moment. It will be less technical and more Infotainment. In our faculty we have some eminent scholars of international repute. Prof. Harish is working in the field of Artificial Intelligence. The famous Humanoid Robot designed and brained by him.

Sound Effect of clapping and whistle etc.

Announcement :- Prof. Harish works on Artificial Intelligence, Data, Computer Science and new Algorithms and his publications are cited throughout the scientific community. Now I invite Prof. Harish on the podium.

Sound Effect of clapping

Prof. Harish: - Hello! (With smile and in lighter mood). On behalf my team I welcome you all.

Sound Effect of clapping

Prof. Harish:- A different kind of event, it requires your patience and endurance. You will find the cream and one of the best mind of our team. You have seen and experienced it during COVID-19. Scientists, politicians and the humanity have realised that the future can't be one sided. For sustainable development and our survival, we have to move fast on new technology and that can only.....only beis..... Artificial Intelligence.

Sound Effect of clapping

(In the Audience):- Vow! What a great personality?

Clapping

Prof. Harish:- Gentlemen ! My work is my presentation and for this I invite Mr. Rumba to deliberate on our innovation and research.

Sound effects of Robotic voice

Rumba (Humanoid Robot): - (Voice modulation) Hello...! Good morning. How are you? I can guess from your face?(Laughing). Look.....look ...there..... Good beautiful smile..... I can have similar smile.....Will you like to enjoy that....?

(In one voice):-From audience side.....Yes...yes.

Rumba (Robot):- (Voice modulation): Look.....look.... there....I mean on the last row. I can smile but my smile may not charm you!(Hee.....hee.....heee....)

(Among the Audience): - But we want to enjoy all this.

Rumba (Robot): - Laughing..... seem to be very intelligent. Do you know? God blessings are reflected through your expression and smile. My own creator...I mean Prof. Harish forgot to put all these on me. I can laugh like you but I can't enjoy that? That is the difference between your God and mine God. But I am optimist. Soon you will find all these on my next generation. Haa.....Haaa.... haaa....

Clapping

Mansi :- Mr. Rumba....Always a generation gap (laughing).

Rumba:- (Voice modulation): I don't understand, which generation gap? I am still in my primitive stage than where is the question of generations.

Prof Harish (Off the mike):- Yes Mr. Rumba. Our God created us and we created you. Here is also a form of gap. We are still evolving and so are our brains. In due course of time, you will be equally superior to reflect your feelings (Laughing).

Rumba (Robot):- (Voice modulation): That I have. But I can't express my feeling.

Clapping

Abhinav (From the Audience):- Mr. Rumba, we are enjoying your laughter. Your expression can be seen on the audience face (laughing).

Laughter

Mansi : - Great expression....

Rumba (Robot) :- But that is not mine..... I wish, I have.

Clapping

Rumba :- (Voice modulation): O.K. Gentleman. Be serious. Let's come on the subject. I am your host to present the work of Prof. Harish.

Sound effect/change over Music

(Audience):- Vow! He will present the power Point on behalf of Prof. Harish.

Rumba :- (Voice modulation): Don't laugh....don't laugh.....HAATH KANGNE KO AARSHI KAYA.

Clapping

Rumba (Robot) :- Silent...silent..The topic is, "Gaming and Artificial Intelligence". Who is going to be a judge? Myself (Laughing). 'TOU DEEL THAAM KAR BAITHIYE AUR MAJA LIJIYE' (Laughing).

Change over Music/ Effect of slide show/Projector etc.#####

Rumba :- Gentleman history is going to be created and you are becoming part of that history (Laughing). Like the evolutionary chain of man, you can see its progress and evolution. I take you two decades back. That was the time to find solution to tackle the problem of 2000K. In the year 1997, IBM's Deep Blue beat Garry Kasparov, who was the world Champion in chess. One of my elder cousin made that history (Laughing).

Clapping

Narrator-I:- Mr. Rumba has promised to narrate the story of his prototype nick named "Deep Blue" and the game with Garry Kasparov. He will be happy to take us on that journey. Are you ready to accompany on that golden journey?

Change over Music

(From audience side) Vow ! Mr. Rumba, we would like to know how your ancestor, the Deep Blue in 1997 beat Mr. Garry Kasparov - the world champion of chess?

Sound effect of whistle/hooting/noise etc#####

(In one voice):- That is good suggestion. Please.....please.....Mr.Rumba.

Rumba: - OK....OK..... I shall take you on that memorable journey.

Change over Music

Scene: -- Creation of a scene of a chess game..... Noise, hooting, whistles, mike hollowness and so on..... Part of running commentary....

Rumba: - That was Golden moment, when the project was started at the Carnegie Mellon University. One Mr. Anantharaman an Indian origin scientist was also a member of the research team. After one chess contest in 1989, he was nick named, "Deep Blue".

Sound effect.... Vow.... Shouting /whistle etc

Rumba: - Gentlemen! It took over 20 years. It was the year 1996. The first game was played in Philadelphia, the historical city of USA. A big gathering of IBM Scientists, researchers, programmers, data scientists and public became the spectators of the grand event.

Sound Effect of Bell etc

Rumba: - What was a match, between man and the Artificial Intelligence machine?

Scene of commentary of a chess game

Rumba: - The first game shocked the world, when Kasparov was forced to resign after thirty-seven moves against the super computer.

Scene of public hooting/whistles/noise/gossips etc

(Audience):- This mean Kasparov was not defeated by the machine.

Rumba: - Vow! Kasparov regain his championship in the second round. There is pin drop silence. After first two rounds, peace was restored and game three and four were drawn.

Rumba: - In game five the Deep Blue team would come to regret. Kasparov offered a draw on move 23 which the computer. Kasparov took over the initiative and never let up until the computer was forced to resign and thus retain his world championship and human superiority over the machine. Man was still the king.

Moment of happiness/clapping

Prof. Harish: - But the story doesn't end here. His predecessor was perfected in new module.

Change over music

Rumba: -- Yes Professor. The second and rematch took place in New York City in May 1997. Public curiosity was huge. Reporters and television cameras swarmed around the board.

Sound effect & change over music

Rumba: -- Deep Blue played very aggressively and sacrificing a knight on moves eight! Kasparov never recovered from this stunning move and went down in flames in just 19 moves. That was the power of my ancestor (Laughing).

Public whistles/hooting etc.

Rumba: -- It was a great moment to supersede the humanity in intelligence. Mr. Kasparov cried foul at a press conference.

Sound Effects of cry and sorrow etc.

Prof. Harish: -- This was a historical moment in the history of chess. The match appealed to chess players, scientists, computer experts and the public.

Vow ! Intelligent machineClapping.

Rumba:- I am not a machine! My name is Rumba and I can do and think what you can do.

Mansi : - Sorry, that was mistake on my part.

Rumba :- (Laughing) That is fine. Yaa.....I was talking? Remember..... Talking about the history of gaming. In the Arcade games AI was used in the form of stored patterns during 1978. Here simulation of random movements of aliens, were pre-programmed. In the year 1980, Pac-Man hit the arcades.

Vikas:- Mr. Rumba can you narrate the history of earlier days?

Rumba: - Why not? Do you know, video games were born without AI? The first game was called “Tennis for Two”, (laughing). Yes, Tennis for two. “Artificial Intelligence’ was incorporated in video games such as in Pong, Space Invaders and Donkey Kong.

Vikas: - Interesting names.

Rumba: - Ya.....Ya.....“Jaisa Naam, Vaisa Kaam” (Laughing).

Hooting from the public

These games were running under simple rules and the agents didn't have the ability to make decisions. “Space Invaders” is an example of it.

Effect of space machine

In this game, player must shoot the aliens before to reach the bottom of the screen. The way these aliens move is pre-coded into the game.

Sound effect of Pong/ video game

It was “Pong” that made people believes that computer think. This made people experience the same feeling of playing against a real human being.

Mansi - Wonderful to know all this Mr. Rumba. This is a long and interesting journey.

Rumba:- Not only the knowledge is wonderful but the journey itself is wonderful. Prof. Harish is right person to reply your question.

Effects of Mike Adjustment

Prof. Harish :- Thank you Mr. Rumba for throwing question on my side (Laughing). Combat games was the next phase and Artificial Intelligence was used for creating realistic opponents.

Sound effect of Video game

Here one can hunt players, building on the generic attack or defend his mode of action.

Sound Effect of Online taxi service

(From the Audience Side):- Hello Professor! Please have some more deliberation with examples.

Prof. Harish:- Have you ever ride the Apps control taxi services, Uber or Ola. The AI taxi drivers can get you from spot A to spot B with no input to pathfinding from the player. Similarly one can watch a wild animal grazing in jungle or zoological park in Delhi or in Chennai.

Clapping

Rumba: - My Lord! Interesting input. One question from my side. How all these happened and the technology work? (Laughing).

Prof. Harish : - This question means encroachment on my intellectual property right (laughing). It is all through Data Mining. It helps the developers to augment automatically the difficult levels.

Vikas : - I would like to add the Augmented Reality. What you think about the augmented reality of PokémonGo.

Sound effect of PokemonGo game

Prof. Harish:- It was reported that there were over 30 million active users in less than a month of its release. See its craze particularly among the younger generation.

Rumba:- Prof. Harish one thing, I would like to add. There is clear cut distinction between Academic AI and gaming AI.

Prof. Harish :- Artificial Intelligence in chess and other entertaining games is not as important as it is applied in the field of research. Players should never consider reaching certain level so that he gets a chance to win the computer opponent before he buys the game (Laughing).

Rumba: - Professor , Puzzle game is another example (laughing). Here my mechanical brain works. In gaming, Real-Time Strategy is also important.

Prof. Harish :- Real-Time Strategy in games has its own history. Here two players build resources and carry out combat by proxy.

Rumba (laughing): - I can feel the units just won't respond immediately when I ask them to move!" This would kill a real-time game in me.

Professor Harish: - Yes Mr. Rumba. To solve problem logically, a unique method so called "Goal-Oriented Reasoning" is adopted.

Rumba: - Hello audience! One challenge for you. Is there anyone who can smash the record of solving the Rubik's cube? Before mine record, my step brother 'DeepCubeA', completed the popular puzzle in a fraction of a second much faster than the world record held by Yusheng Du of China. Man takes at least 50 moves to solve the puzzle. But...but....I can solve it in less than half attempt and will just take only 20 second (laughing). This is all due to blessing of Prof. Harish on me (Laughing).

Clapping

Prof. Harish :- In addition to this Mr. Rumba can handle visual and audio-video data very quickly.

Mansi :- Sir....sir.....What about economical aspect of AI in gaming?

Prof. Harish : - Enormous.....enormous scope. It has been projected that the gaming industry has grown significantly and is expected to reach \$138.5 billion by 2021.

Rumba: - Gentlemen, it is a much-debated subject. There are people from different corners who are backing it. Whichever comes out on top, the gaming industry will continue to evolve rapidly. It is really an exciting time to be a gamer

(Laughing)

(From Audience):- My question is to Prof. Harish. What do you feel about the future of gaming industry and the present direction of research that is going on in your laboratory?

Prof. Harish:- With more scientific research on Artificial Intelligence, you can expect a promising future. I can say that Artificial intelligence will keep on creating a huge impact on the video gaming and e-gaming industry. What is the second part of your question?

(Audience): - It was regarding present status of research.

Prof. Harish: - Yes.... yes... remember. Since the information turns out to be increasingly accessible and simplified to the normal game developers, we are probably going to see an immense move to further developed visuals and characters that can make their own storylines.

Rumba: - Gentlemen! You know, about the punctuality of Prof. Harish. If any question, please discuss during tea break.

Mansi: - Sir, please. Last question. Any new opportunities to the young entrepreneurs and game developers to showcase their talent and skill?

Prof. Harish: - Interesting question. It gives satisfaction when I find such questions from young talent. You will be happy to know that our Young Developers have started making AI-based player profiles in their game frameworks to give a characteristic vibe to the players. The AI players are prepared and trained with styles. This gives a realistic feeling.

Rumba: - Sorry to interrupt you Prof. Harish. I would like to add your own words. "Gone are the days when games were just about passing time. Nowadays, new AI techniques and algorithms are developing, giving an exciting opportunity for game developers to showcase their full potential."

Prof. Harish: - Thanks Mr. Rumba for an exciting presentation. Next time, you will be on the table tennis side to fight and defend yourself against our National Champion. Your technical evolution is much faster than human biological evolution (Laughing).

Mr. Rumba: - Thanks my Lord! Finally, I would like to convey my sincere thanks to the audience for their active participation. My thanks to the organisers and the participants.

Change over Music

Narrator : - Hello friends! With this, we come to the end of this part. We will be back with a new episode next time. Till then good bye.

Closing part of the Title Song/Music