

Episode 37

Preparing for Tomorrow

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Summary

Artificial Intelligence or A.I. has quietly entered our lives without sounding a warning and is consolidating its hold on it. Today, its influence on the social and economic aspects of our lives is clearly evident. All developed and developing nations are investing in research to catalyse progress in the field. In India too, the deployment of AI is envisaged in sectors such as Agriculture, Health, Industry, Transport and smart cities. It is anticipated that this investment in AI today will translate into improving the economy of the nation and adding a fillip to it in the times to come. However, there is also the apprehension that when smart machines begin to operate or Industry becomes automated, there will be a decline in employment opportunities. India is a nation of youthful citizens. Let's take a look at what effect AI could have on employment...let's explore this scenario in *Preparing for Tomorrow*, the next episode of *Aanay Wala Kal*.

Characters

Rajan: Male. 24 years old.

Bhaskar: Unemployed. 25 year old man.

Abhinav: IT professional. 24 years old.

Kamala: 45 year old. Domestic-help.

Priti: Woman 24 years old. Abhinav's friend.

Mome: 50 years old. Abhinav's mother.

Voice of Mr Verma (On phone)

An apartment where the three friends live. Two are IT-experts; the third is hunting for a job.

Scene 1

Doorbell rings

- Rajan:** Bhaskar, Please answer the door...maybe it is Kamala aunty.
- Bhaskar:** Not me.....Bhaskar.....you go and answer the door...the mosquitoes troubled me so much last night, I could barely sleep. I am just about falling asleep now.
- Rajan:** Bhaskar...I returned at 2 AM...let me sleep a little longer.
- Bhaskar:** I have thought...
- Rajan:** Think later Bhaskar, it must be Kamala aunty...open the door. If you don't; you won't even get any breakfast let alone complete your sleep.
- Kamala:** But breakfast is ready, I have made it.
- Rajan (surprised):** When did you come Kamala aunty? Who opened the door for you?
- Kamala:** The door was open.
- Bhaskar:** That means when you entered Rajan at 2 in the morning you did not lock the door behind you.
- Rajan:** Well, I may have...well, never mind whose fault it is...open the door first.
- Kamala:** While you two keep asking each other to open the door, poor Abhinav must be getting tired waiting outside. I will open the door!
- Bhaskar:** I have decided...I have decided...

Sound of door being opened.

- Abhinav:** My friends Bhaskar must be still asleep....I think the mosquitoes sang lullabies for Bhaskar through the night.
- Kamala:** Yes, the anti-mosquito coils got over sometime back...the lazy-lump must have neglected replenishing the supply. Bhaskar bhaiya was muttering...I have thought...I have decided...
- Abhinav:** I wonder what he has thought about...he has been sitting at home for the last three months. Without a job. Unemployed!
- Kamala:** Bhaiya, there is no need to get tense...now go and freshen up. I will serve breakfast.

Scene 2

Sounds of crockery and cutlery

- Rajan:** Kamala aunty, what have you made for breakfast?
- Kamala:** Dosa, Idli and Sambar.
- Abhinav:** You made my heart rejoice, aunty!
- Bhaskar:** I have made up my mind...I have made up my mind...
- Rajan:** Dear Bhaskar, I admit you are more knowledgeable than the deity called Google but what is it that you have made up your mind about?
- Bhaskar:** I have made up my mind to design a machine or a Robot that will clean the house and also cook as brilliantly as Kamala aunty does!
- Rajan:** Does it mean you will fire Kamala aunty?

Sounds of food being placed on table

Sounds of utensils, knives, forks, and plates

- Abhinav:** I don't think your robot can ever cook Dosa and Sambar the way Kamala aunty, can.
- Bhaskar:** Why not? All I need to do is to code Kamala aunty's memories...I can make it happen!
- Rajan:** Let it be.. Bhaskar, you couldn't even get the mosquito-repellent coils yesterday.
- Bhaskar:** I have thought about that as well.
- Rajan:** Keep thinking.. Bhaskar, by the way...what did you think about?
- Bhaskar:** About a micro robot to kill the pesky flying mosquitoes.
- Rajan:** When I came home..... I found you clapping...perhaps you were trying to kill the mosquitoes. Tell me, did you succeed?
- Bhaskar:** These are smart mosquitoes, Rajan bro. As soon as I raised my hands to hit them...they...
- Rajan** (**finishing the sentence**): Changed their flight path and you ended up clapping in vain.
- Abhinav:** Now, if you failed to kill the mosquitoes, how likely is it that your creation...the AI-robot will succeed?

Rajan: Do you know how complex the algorithm will be? Do you realize how difficult it will be to understand and code the workings of the mosquito's brain and its movements?

Bhaskar: You have not yet fully comprehended the power of AI Rajan.

Rajan: I have understood it well enough and am also aware of the limitations that are coming to light.

Abhinav: You forgot that smart lock who needed to recognize the voice before answering the door.

Rajan **(laughing):** I remember now Abhinav ! This fellow came home wet...it had been raining and he had caught a cold. His voice was hoarse and did not sound like his normal voice at all.

Abhinav: And this smart lock did not answer the door because he did not recognize the voice....and the poor fellow kept shivering outside for a long time.

Bhaskar: That...that was an exception and it can always be corrected dear Abhinav.

Kamala: Are you going to keep talking all the time? Here, I got you piping hot dosa.

Abhinav: That is why I am convinced that AI cannot rival natural human intelligence.

Bhaskar: Looks like you are making a U-turn in your argument because that is exactly what I am saying...the human brain has enormous power.

Kamala: Whose brain?

Bhaskar: Human brain. Human as in people like you and me.

Kamala: I donot know about you but if I had been intelligent would I have been a teacher in some school.

Bhaskhar: Great Aunty.....

Rajan: Now...go on...explain to Kamala aunty.

Abhinav: Some other time Rajan..... Kamala aunty, my parents are coming over for a couple of days.

Kamala: No problem Abhinav. But they are coming over so suddenly...is everything OK?

Bhaskar: Our Abhinav is going to be taken captive, you know.

Kamala: Why? Has he committed a crime?

Rajan: That he has. He has been captivated by love and is about to get married.

Bhaskar: Are they coming to meet the bride-to-be?

Rajan: Priti...that's her name, isn't it?

Abhinav: Yes, Rajan, that is her name. She is in HR.

Rajan: That reminds me...her office is in the Tower adjoining yours, isn't it?

Bhaskar: Kamala aunty, give him dosa and sambar...who knows when he will taste this again. Of course, I can always sell him my robot.

All laugh

Rajan: Kamala-aunty, please clean the house extra well today. You know Uncle and Aunty are arriving tomorrow.

Abhinav's phone rings.

Abhinav: Hello.

Priti **(sounds upset):** I need to meet you, Abhinav.

Abhinav: What about this evening?

Priti: No, Abhinav I need to meet you right now.

Abhinav: Is everything OK? Why are you crying? Wait, I am coming over rightaway! **(to himself)** Priti sounds quite upset; I have to go and meet her.

Rajan: I hope Abhinav her parents have not refused their consent to the wedding.

Abhinav: It was so difficult to get them to agree in the first place...and now my parents are arrive tomorrow...I just hope things don't go wrong.

Bhaskar: Don't lose your nerve, dear bro Abhinav . Look I am going in that direction anyway...I have an interview to appear for...I'll drop you off. I have booked a cab...an AI-based driverless car!

Car horn blares

Scene change

Priti and Abhinav are at a road-side park. Priti is sobbing.

Abhinav: Priti, Are you going to keep crying or are you going to tell me what happened? Have your parents opposed our match?

Priti: No Abhinav.

Abhinav: So, have YOU changed your mind?

Priti: No.

Abhinav: Then, what is the matter Priti ?

Priti: I am afraid I will lose my job. Our office is being transformed into an AI-based smart office.

Abhinav: Ah! So, your office will no longer require the services of a HR-manager.

Priti: They will need a HR-manager; just not a human one. The task will be handled by an AI-enabled machine that is...a computer.

Abhinav: Oh! I know...our office created that software...I was on the team that worked on it.

Priti: So, Abhinav you too are to be blamed, in part at least, for my fate.

Abhinav: But...but that is how the future is going to be.

Priti: Who knows how many more will lose their jobs like me.

Abhinav: Come on, now Priti. You are just worrying un- necessarily...this software is designed to help with repetitive tasks...you know, those jobs that are boring or which tire you out. Those are the tasks AI-machines handle well.

Priti: I know that. I have seen these automated jobs being done in factories where cars are made. These smart machines handle such jobs well. ...however, my job is related to human resources. It involves recruiting the best manpower...the best technicians or workers so that the factory's production and profit both go up.

Abhinav: I do not think you should be worried.

Priti: Not be worried? People are being laid off Abhinav. Many have been served termination notices. Your parents are arriving tomorrow...how can I meet them when I am facing such uncertainty?

Abhinav: But you haven't been handed a Termination notice, have you? Come on Priti, meet my parents tomorrow...we will face the rest of the issues afterwards.

Priti: People are saying that AI is the new revolution...it will change every aspect of our lives...they are correct ...the changes are already becoming evident Abhinav. A large segment of society will become unemployed.

Abhinav: It is not necessarily true. I have read that when the IT revolution happened, people were similarly apprehensive about it...but see, today the IT-sector is the prime generator of employment.

Priti: I hope your words come true Abhinav.

Abhinav: Come on, cheer up now. You have to meet my parents tomorrow...your parents have approved me (**laughs**). I have passed their test. Now to see the report card you get from my parents.

Scene 3

Three friends are sitting at the table

Kamala aunty is placing plates before them

Rajan: How far have our parents reached Abhinav?

Abhinav: Only Mummy is coming, my father is not coming. There was some sudden and urgent work. So...

Bhaskar: Well, the approval of the Home Ministry is what matters the most Abhinav.

Abhinav (**fretting**): Priti hasn't reached yet.

Kamala: I am sure she will be here soon...be patient Abhinav.

Abhinav: I have told you Rajan, haven't I ...she is quite worried and tense about her job.

Rajan: But why?

Abhinav: All because of AI.

Bhaskar: AI! I told you earlier...AI is the beginning of a new age.

Rajan: We are witnessing it Bhaskar. The new age has commenced...employment is being snatched away from the youth. Automation is replacing the youths.

Bhaskar: Automation will affect our nation in a novel manner.

Rajan/Abhinav: How?

Bhaskar: Most of our citizens are young. India is a youthful nation.

Abhinav: That is why Bhaskar you lost your job first...and now, it is Priti's turn. If you look closely you will find that AI is to blame.

Bhaskar: That may be correct, but...

Abhinav: What is this but Bhaskar ?

Bhaskar: This is a time of transition...of change. It is possible that, after the initial hiccups, we may witness a major positive transformation in India.

Rajan: Is our society prepared for this transformation Bhaskar?

Abhinav (sarcastically): And have you landed one of those new-fangled jobs...you did appear for an interview yesterday.

Bhaskar: Dear bro Abhinav This is a time for change...be patient. Wait a little.

Rajan: You have been waiting for three months to land a job. Abhinav has been waiting for a year to get married...and I have been waiting forever to get a raise. The transformation is not being easy for any of us.

Abhinav: I had been hopeful that the economy would get a boost thanks to AI...now I feel it isn't ready for this change.

Bhaskar: Look Abhinav, our economy is definitely being boosted by AI...

Abhinav: Do you really think Abhinav this boost has led to the creation of new jobs?

Bhaskar: While the introduction of AI has led to the loss of some jobs...you cannot deny that it has also created the opportunities for new jobs.

Kamala: Finish your breakfast, boys. I am not going to heat it up for you.

Abhinav (laughing): Just wait for a few days more. In the times to come these mundane jobs will be done by robots and it will obey the orders...EVERYTIME. Bhaskar, what do you say?

Bhaskar: The future belongs to machines. Robots and computers will do all what humans are doing today.

Door bell rings

Abhinav: I think Mom is here!

Rajan: I'll answer the door.

Sounds of the door opening

Rajan: Welcome Priti, we have been waiting for you.

Priti: And this lady is with me...I met her downstairs. She wanted to come to your apartment and was asking about the Flat number.

Rajan: Namaste aunty...oh! She is Abhinav's mom...she has come here to meet you.

Priti: I apologise. I am so sorry Aunty, I did not recognize you.

Mome: Please do not apologise. How would you recognize me Priti...we have never met before.

Rajan: But you will keep on meeting now.

All laugh

Rajan: Come in...breakfast is ready aunty and awaiting your pleasure.

Mome: I am pretty hungry too!

Rajan: Kamala aunty, please get us two extra plates.

Scene change

Mome: Kamala ji you are an excellent cook.

Rajan: Priti is a good cook too.

Mome: Abhinav tells me you are a little perturbed about your job, Priti.

Abhinav: Mom, you teach Social sciences...what do you think...will AI spell the end for employment?

Mome: My child, progress, technical advancement and novelty influence employment opportunities. This is a fact. It is likely AI will impact employment but it will not finish off all employment-opportunities.

Bhaskar: I totally agree. This is what I have been saying all along. This is the time for change.

Mome: AI will step into fields where the task carried out is repetitive in nature. Automation will step into these areas.

Rajan: It is possible that people who have been rendered redundant because of AI may be reabsorbed by their companies and given better jobs...jobs of improved quality.

Mome: We will need to implement new policies for this to happen.

Bhaskar: May be the way we have been carrying out a task will change...if we incorporate AI may be we will not only save time but also improve output-quality.

Abhinav: Can it not be that we upgrade ourselves too to step forward, accept and implement those new techniques that have pointed the way to a new era of development?

Mome: Why not? To do so we will have to hone our education system and policies. Our new education policy, science and technology and innovation will lead the way into the future.

Bhaskar: I feel that we have a misconception that AI will cost us our jobs. If we look back at history...at an age where horse-drawn carriages were taken over by

automobiles then we have to agree that the unemployment it caused was a temporary one. So many new ways of transportation evolved and now, it is a fully-fledged Industry that employs innumerable people.

Rajan: Here employment opportunities are decreasing as AI is being increasingly deployed.

Doorbell rings

Rajan: Kamala aunty, please answer the door. I had ordered sweets for everyone...it is a sweet occasion today, you know.

Mome: But Priti is still not smiling.

Priti: Because of AI, the rate of change as compared to the past changes is 10 per cent faster. If we take the Industrial Revolution as the baseline it is happening at a 300 percent higher scale and with 3,000 times the impact...isn't the thought itself frightening? Our company has begun terminating the services of many of its employees.

Mome: Perhaps you are talking about the report published by McKinsey Global Institute. This transformation is taking place globally. We have to prepare ourselves for this transformation. Otherwise we will lag behind other nations.

Priti: I just hope that commoners like me are not left behind in the race.

Bhaskar: Don't worry! You won't be left behind. There are plans to turn India into a hub for AI.

Mome: AI may lead to job-cuts especially in small businesses but that will take at least a decade...no need to become depressed now.

Bhaskar: I agree. AI is the engine driving the economic and social advancement of a nation. Think of machines empowered by AI, deep-machine learning in education...all these are emerging areas in different fields.

Rajan: Bhaskar! This is your field...this is the area where you have been looking for employment.

Bhaskar: Yes, this is a new field. It simulates via a model the workings of a human brain.

Abhinav: And then a machine emulates it through coding or a program.

Bhaskar: We even have machines these days that can pick up cues from the surrounding environment and take decisions based on that information.

Priti: Machine learning! This makes it almost as good as you and me!

Bhaskar: Yes, we are advancing in our quest to make machines even more intelligent. This will ultimately empower humans.

- Kamala:** If machines learn...will they also go to school? **(Laughs)**
- Abhinav:** Kamala aunty, machine learning means that the machine has been made more sophisticated by means of improved coding or programming. It does not mean that machines have to go to school.
- Rajan:** Big data is the raw material for machine learning, isn't it? The computer analyses and uses it to be more accurate.
- Rajan:** But irrespective of big data, Kamal aunty, I can tell you no machine can match the dosa, idli and sambar that you make.
- Kamala:** So my job is not threatened by AI.
- Mome:** Not a bit and neither is Priti's job. AI-related new jobs will need the services of data scientists and data quality analysts ...Priti why don't you start upgrading your skills from today?
- Rajan:** I have enrolled for data analyses and AI-related courses...if my current job is at risk, I can switch over to another, immediately.
- Mome:** In the production sector too, there will be a demand for engineers who can handle machine-learning. And yes, simultaneously, there will be a demand for programmers who can provide AI-related solutions, software engineers and designers.
- Bhaskar:** Very true...and this applies to the social sector as well.
- Priti:** So, I was worrying un-necessarily for the past week!
- Abhinav:** Look Priti, when the industry deploys AI, will it not need a digitally-skilled workforce?
- Mome:** Very correct. This is why each and every company must keep their eyes on the upcoming AI revolution and upskill their employees to prepare for it. The companies must emphasize digitalization.
- Rajan:** What about doctors, nurses and professors...are their professions going to face the impact of AI too?
- Mome:** Not in the next decade or so.
- Bhaskar:** AI can enhance their productivity.
- Rajan:** Make them smarter, you mean. Yes, even they will have to upgrade their skills. Like me!
- Mome:** In the days to come human endeavour and technology will have to work together.

Rajan: Kamala aunty, what will you cook for Abhinav's mother? Cook something special.

Kamala: Finish your breakfast first...then think about lunch. Anyway, what I am making for lunch is a secret.

Abhinav: Can a robot do this? It would have created only that which we would have instructed it to make. But see...Kamala aunty has managed to create suspense around what she is going to cook for lunch. She has aroused our curiosity about what we will enjoy at lunch.

Mome: The entire social and economic structure is changing globally because of AI.

Abhinav: Yes. That is clearly evident. Be it business, or education or governance or social welfare...AI is there doing its bit.

Mome: Take Kamala for instance. Thanks to her smart phone, she can access recipes from around the world...and cook these for you.

Priti: I think boring jobs can be tackled efficiently by AI.

Abhinav: Certainly! Technology automation can be especially useful in addressing customer complaints, call centre operations, digitization of documents and content moderation.

Bhaskar: It is also beautifully adapted for jobs related to production, operation of machines as well as operation and report systems. AI can be used or even smart robots in these areas.

Mome: Do not forget that AI allows humans to transcend inherent abilities when it comes to data processing. AI has really lead to an explosion in the scope of this field.

Priti's phone rings

Mome: Why have you gone pale, Priti? Whose number is it? Who is calling you?

Priti: It is from my office. It is the General Manager Mr. Verma, who is calling...my job may be at stake...

Abhinav: You don't know that! Don't think such negative thoughts, Priti.

Mome: Go on talk to him answer the phone.

Sound of the phone-call being received

Priti: Hello. Priti here.

Voice: This is Verma.

Priti: Yes Sir...Good Morning.

Voice: You are aware, I think that we are introducing AI-based automation in our office.

Priti: Yes Sir.

Voice: Much of the work that you used to do will be done by a machine now.

Priti: You mean...

Voice: Thus your output will increase and the quality of work will be better too because you will be assisted by the machine.

Priti: But how...

Voice: That is why I am calling you. Next week we will be sending you for a month-long training to learn about how to work with AI-enabled machines.

Priti: Office rumours said that...

Voice **(finishing Priti's sentence)** : That we are terminating our staff?

Priti: Yes Sir.

Voice: Well, initially the management did think about it but then it was realized that even after automation, we would still need our staff. Of course, the required skill set would be somewhat different. It is definitely better to re-train our own staff than to recruit absolutely new ones. It was decided to retrain the old staff and upskill them. You are one of the selected ones. Get ready and best of luck. You will be joining the first batch and going to Bangalore for training.

Priti **(smiling):** Thank you, Sir.

Bhaskar: Let's open the packet of sweets.

Mome: I have been wanting to do so for a long time. I will eat at least two rasgullas.

Bhaskar: Yes, Aunty, you must eat one for Abhinav and Priti...the couple and one for Priti alone.

Rajan: Kamala aunty please bring the packet of sweets.

All laugh