Communication & Presentation Skills
(Theory)

Group Members:

Name	Roll No	Work Done
Sufiyaan Usmani	21K-3195	Audience Profile, Research, Brainstorming, Organizing Research(outline), Script
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Section:

BCS-2J

Teacher Name:

Miss Sabeen Amjad

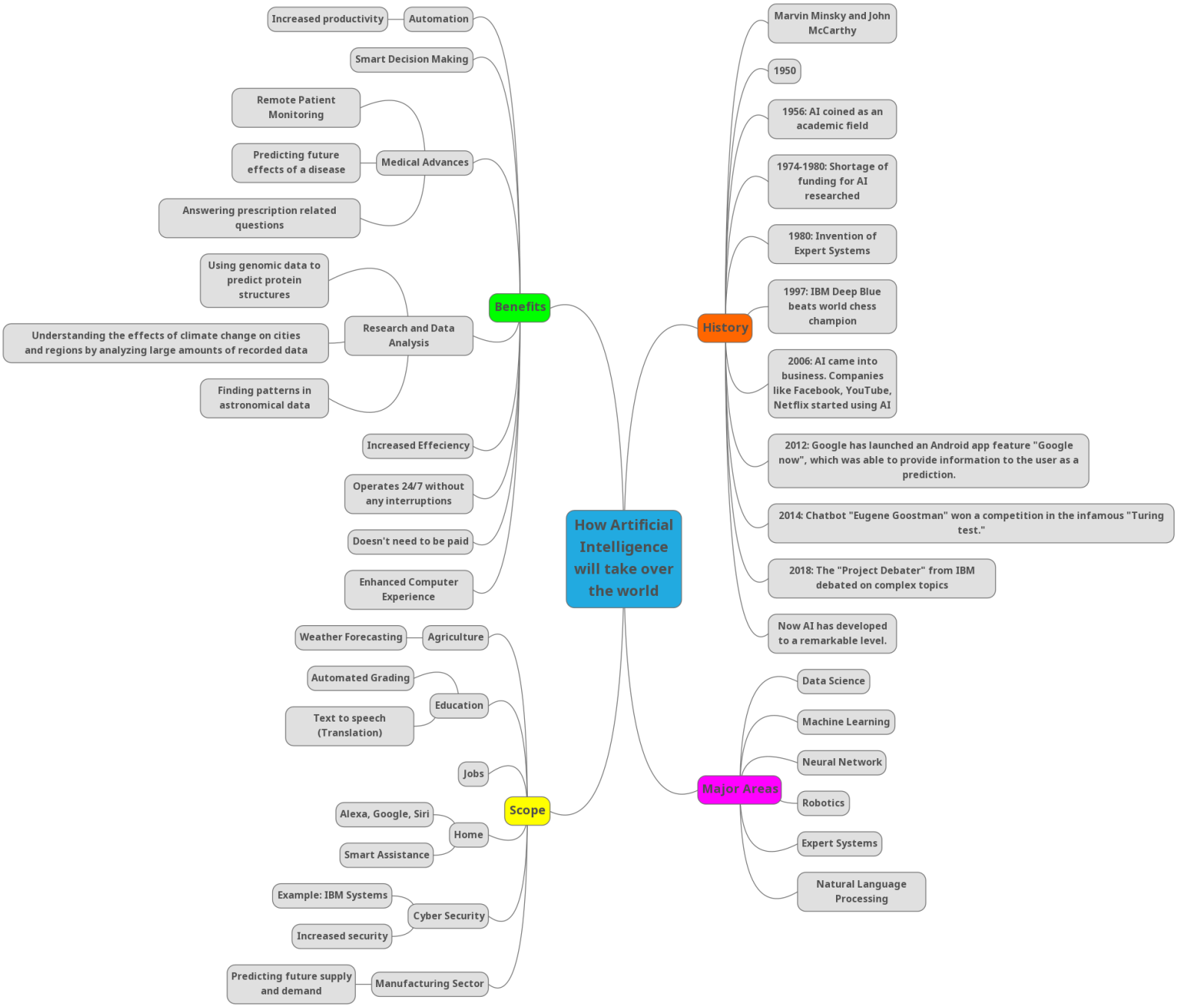
Selection of Topic

How Artificial Intelligence will take over the world

Audience Profile

Audience Profile Questions	Answers
Who are they?	University students and teachers.
How many will be there?	Around 50.
What is their educational background	They all have a background in Computer Science.
What religious and cultural background will the majority possess?	The majority of them are Muslims and belong to Karachi.
What age group do you expect to encounter?	Students will have ages between 18-24, while there will be variations in the age of teachers.
What do they know about your subject?	All of them will know the basics of Artificial Intelligence.
What background knowledge do you expect them to have about your topic?	They should know how a computer works. I also expect knowledge of programming from them.
What do you think they would be expecting from your presentation? Put yourself in their shoes and think?	After my presentation, they will know why Artificial Intelligence is so important these days, how it will shape the future, and what they need to do to pursue their career in AI.

Brainstorming

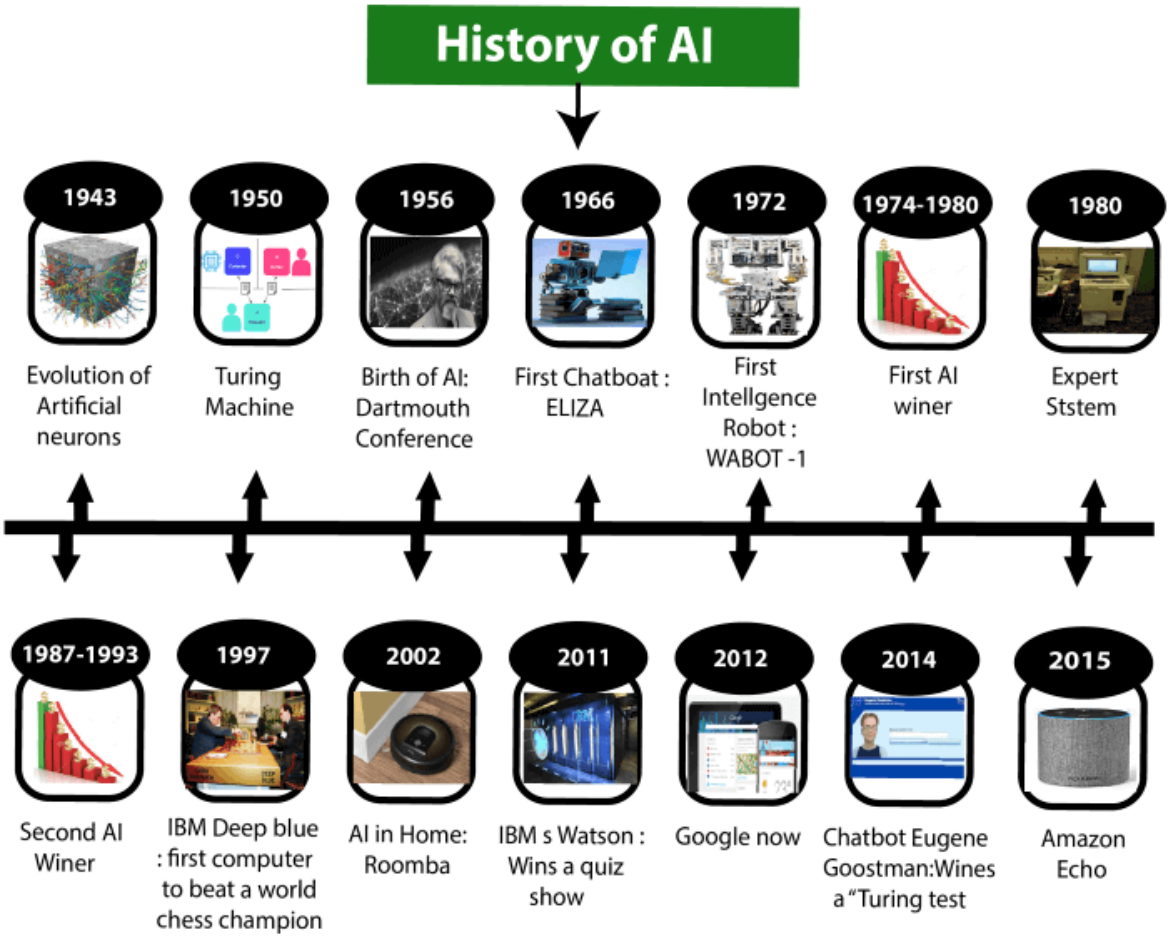


Research

History of AI:

The beginnings of modern AI can be traced to classical philosophers' attempts to describe human thinking as a symbolic system. But the field of AI wasn't formally founded until 1956, at a conference at Dartmouth College, in Hanover, New Hampshire, where the term "artificial intelligence" was coined.

Following are some milestones in the history of AI which defines the journey from the AI generation to till date development.



Source: https://www.javatpoint.com/history-of-artificial-intelligence

Benefits Of AI:

Below are the 10 most remarkable benefits of Artificial Intelligence that are helping to reshape the world that we know of today.

1. Automation

Automation is one of the most commonly cited benefits of AI technology, and it has had significant impacts on the communications, transportation, consumer products, and service industries. Automation not just leads to higher production rates and increased productivity in these sectors but also allows more efficient use of raw materials, improved product quality, reduced lead times, and superior safety. Automation can also help to free resources that can be used for more important things.

2. Smart Decision Making

Artificial Intelligence has always been used for making smarter business decisions. AI technology can coordinate data delivery, analyze trends, develop data consistency, provide forecasts, and quantify uncertainties to make the best decisions for the company. As long as AI is not programmed to imitate human emotions, it will remain unbiased on the matter at hand and will help to make the right decision to support business efficiency.

3. Enhanced Customer Experience

AI-powered solutions can help businesses to respond to customer queries and grievances quickly and address the situations efficiently. The use of chatbots that couple conversational AI with Natural Language Processing technology can generate highly personalized messages for customers, which helps to find the best solution for their needs. AI tools can also help to reduce the strain from the customer service staff, which will lead to better productivity.

4. **Medical** Advances

The use of Artificial Intelligence solutions in the healthcare sector is becoming increasingly popular these days. Remote patient monitoring technology, for instance, allows healthcare providers to perform clinical diagnoses and suggest treatments quickly without requiring the patient to visit the hospital in-person. AI can also be beneficial in monitoring the progression of contagious diseases and even predict their future effects and outcomes.

MAKING SMARTPHONE SELFIES INTO POWERFUL DIAGNOSTIC TOOLS

Continuing the theme of harnessing the power of portable devices, experts believe that images taken from smartphones and other consumer-grade sources will be an **important supplement** to clinical quality imaging – especially in underserved populations or developing nations.

The quality of cell phone cameras is increasing every year, and can produce images that are viable for analysis by artificial intelligence algorithms. **Dermatology** and **ophthalmology** are early beneficiaries of this trend.

TURNING THE ELECTRONIC HEALTH RECORD INTO A RELIABLE RISK PREDICTOR

EHRs are a goldmine of patient data, but extracting and analyzing that wealth of information in an accurate, timely, and reliable manner has been a continual challenge for providers and developers.

ADVANCING THE USE OF IMMUNOTHERAPY FOR CANCER TREATMENT

Immunotherapy is one of the most promising avenues for **treating cancer**. By using the body's own immune system to attack malignancies, patients may be able to beat stubborn tumors. However, only a small number of patients respond to current immunotherapy options, and oncologists still do not have a precise and reliable method for identifying which patients will benefit from this option.

BRINGING INTELLIGENCE TO MEDICAL DEVICES AND MACHINES

smart devices are critical for monitoring patients in the ICU and elsewhere. Using artificial intelligence to enhance the ability to identify deterioration, suggest that **sepsis** is taking hold, or sense the development of complications can significantly improve outcomes and may reduce costs related to hospital-acquired condition penalties.

CREATING MORE PRECISE ANALYTICS FOR PATHOLOGY IMAGES

Seventy percent of all decisions in healthcare are based on a pathology result. Somewhere between 70 and 75 percent of all the data in an EHR are from a pathology result. So the more accurate we get, and the sooner we get to the right diagnosis, the better we're going to be. That's what digital pathology and AI has the opportunity to deliver.

CONTAINING THE RISKS OF ANTIBIOTIC RESISTANCE

Antibiotic resistance is a growing threat to populations around the world as overuse of these critical drugs fosters the evolution of superbugs that no longer respond to treatments. Electronic health record data can help to **identify infection patterns** and highlight patients at risk before they begin to show symptoms. Leveraging machine learning and AI tools to drive these analytics can enhance their accuracy and create faster, more accurate alerts for healthcare providers.

REDUCING THE BURDENS OF ELECTRONIC HEALTH RECORD USE

EHRs have played an instrumental role in the healthcare industry's journey towards digitalization, but the switch has brought myriad problems associated with cognitive overload, endless documentation, and user burnout.

EHR developers are now using artificial intelligence to create more intuitive interfaces and automate some of the routine processes that consume so much of a user's time.

EXPANDING ACCESS TO CARE IN UNDERSERVED OR DEVELOPING REGIONS

Shortages of trained healthcare providers, including ultrasound technicians and radiologists can significantly limit access to life-saving care in **developing nations** around the world.

Artificial intelligence could help mitigate the impacts of this **severe deficit** of qualified clinical staff by taking over some of the diagnostic duties typically allocated to humans.

UNIFYING MIND AND MACHINE THROUGH BRAIN-COMPUTER INTERFACES

Neurological diseases and trauma to the nervous system can take away some patients' abilities to speak, move, and interact meaningfully with people and their environments. Brain-computer interfaces (BCIs) backed by artificial intelligence could restore those fundamental experiences to those who feared them lost forever.

Source: (healthitanalytics.com)

5. Research and Data Analysis

AI and Machine Learning technology can be used to analyze data much more efficiently. It can help to create predictive models and algorithms to process data and understand the potential outcomes of different trends and scenarios. Moreover, the advanced computing capabilities of AI can also speed up the processing and analysis of data for research and development, which could have taken too long for humans to review and understand.

6. Solving Complex Problems

The developments in AI technologies from basic Machine Learning to advanced Deep Learning models have made it capable to solve complex issues. From fraud detection and personalized customer interactions to weather forecasting and medical diagnosis, AI is helping businesses across industries to find the right solutions to address their challenges more adequately. Greater efficiency in solving complex problems means increased productivity and reduced expenses.

7. Business Continuity

Business forecasting using AI technology not only helps companies make critical decisions but also prepares them for any emergency to ensure business continuity. As risk management heavily relies on data management and analysis today, AI-powered tools can help organizations to respond to the crisis proactively. AI and Machine Learning can also create scenarios to help businesses plan for a speedy disaster recovery strategy.

8. Managing Repetitive Tasks

Performing recurring business tasks is not just time-consuming but it can also be monotonous and reduce the productivity of the employees over time. AI-powered Robotic Process Automation tools can automate interactions between different business systems and make the tiresome work easy for the company. It can imitate the actions of humans within the digital systems in the HR, IT, marketing, or sales departments to execute any business process quickly without needing any manual effort.

9. Minimizing Errors

Another great benefit of automating regular business tasks using AI tools is that it helps to reduce the chances of manual errors. As Robotic Process Automation tools take care of the data entry and processing jobs, it can make the digital systems more efficient and less likely to run into or create any problems due to data processing mistakes. This can be especially beneficial for businesses that cannot afford to make even the slightest of errors.

10. Increased Business Efficiency

Artificial Intelligence can help to ensure 24-hour service availability and will deliver the same performance and consistency throughout the day. Taking care of repetitive tasks will not make AI tools get tired or bored either. This can help to improve the efficiency of the business and reduce the stress on the employees, who can be re-assigned to perform more complex business tasks that require manual intervention.

Conclusion

There are many more benefits of Artificial Intelligence that span from space exploration to advancements in defense systems and more. The technology is evolving steadily, and it has the potential to be more intelligent than ever. While there is no surefire way of predicting the future of AI, it will certainly continue benefitting businesses and end-users in their everyday lives.

Research Papers:

Automation:

Highly intense and repetitive tasks have become efficient and the product quality has also increased with the use automation in various industries. ***[Simanta Sarmah, 2019, Artificial Intelligence in Automation, 2]***

Automation and artificial intelligence (AI) are transforming businesses and will contribute to economic growth via contributions to productivity ***[McKinsey Global Institute, 2018, AI, AUTOMATION, AND THE FUTURE OF WORK: TEN THINGS TO SOLVE FOR, 1]***

Medical:

Artificial intelligence (AI), which is based on automation, has the potential to change healthcare and assist tackle some of the crucial issues. ***[Mohammed Yousef Shaheen, 2021, AI in Healthcare: medical and socio-economic benefits and challenges, 3]***

A medical decision-making system can benefit of some important advantages of technology: it is not perturbed by causes that are specific to human beings (stress, fatigue, reduced attention), it has a superior speed, it is efficient, it can be repeated, it can quickly store huge amounts of data being able to make complex connections between them. ***[Adriana ALBU , Loredana STANCIU, 2015, Benefits of Using Artificial Intelligence in Medical Predictions, 1]***

Education:

It is widely expected that AI will have an enormous impact on what we teach, as it will impact many occupations. ***[Wayne Holmes, Maya Bialik, Charles Fadel, 2019, Artificial Intelligence In Education, 5]***

In education, AI can provide auto grading, help students with learning by providing support to their need and help them to stay on track. ***[Simanta Sarmah, 2019, Artificial Intelligence in Automation, 2]***

References:

https://healthitanalytics.com

https:/www.mhealthintelligence.com

https://www.javatpoint.com/history-of-artificial-intelligence

https://www.livescience.com/3407-robot-madness-creating-true-artificial-intelligence.html

https://builtin.com/artificial-intelligence/artificial-intelligence-future

(PDF) Artificial Intelligence in Automation (researchgate.net)

65 Artificial Intelligence Statistics for 2021 and Beyond (semrush.com)

Outline

General Aim: To persuade.

Specific Aim: The audience will fully understand the importance of Artificial Intelligence and why it can do more good than harm.

Audience: University students and teachers.

Context: Auditorium

Introduction: Central Idea: To provide information about AI, its importance, and its future.

Sub-Topic/Major Point 1: Definition of AI, its history, purpose, and real-world examples.

Supporting Points:

1. Definition of AI
2. History of AI
3. Few real-world applications where it is currently used.

Sub-Topic/Major Point 2: Benefits of AI and its importance.

Supporting Points:

1. Automation
2. They can work 24/7 without any errors
3. Increased efficiency
4. Medical Advances such as monitoring the progression of contagious diseases and even predicting their future effects and outcomes.
5. Education
6. Research and Data Analysis
7. Statistics and Research Paper references

Sub-Topic/Major Point 3: Scope in the future.

1. 31.4 % expected increase in AI-related jobs by 2030.

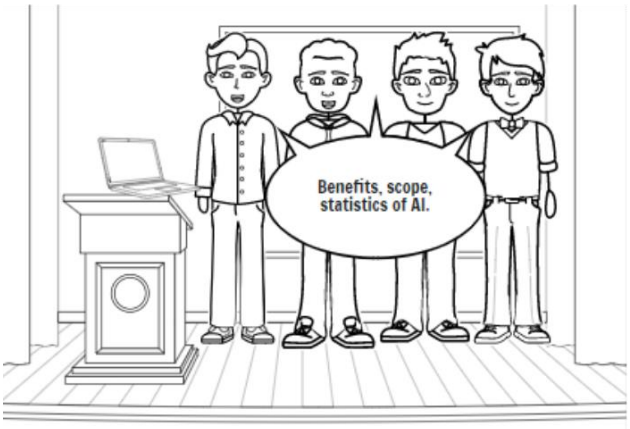
2. It is now being used in non-technical professions such as Transportation, Marketing, and Health Sector.
3. Future predictions using statistics.
4. Advice for the audience if they want to pursue their career in AI:
    a. Data Science, Machine Learning, Deep Learning, Neural Networks are evolving fields with a bright future.
    b. Python learning.
    c. Sharing of contact for more advices related to this topic.

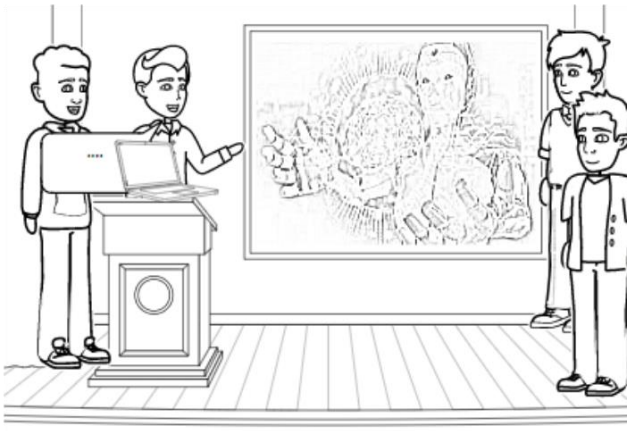
Conclusion:

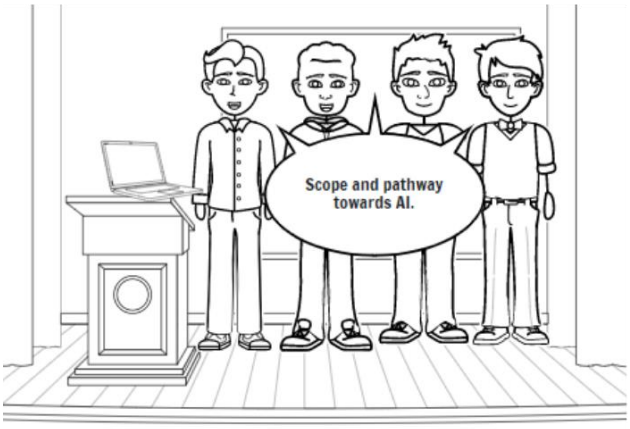
There are many more benefits of Artificial Intelligence that span from space exploration to advancements in defence systems and more. AI will be doing our daily tasks, and we humans will have time to be creative, spend time with nature and make this world a better place.

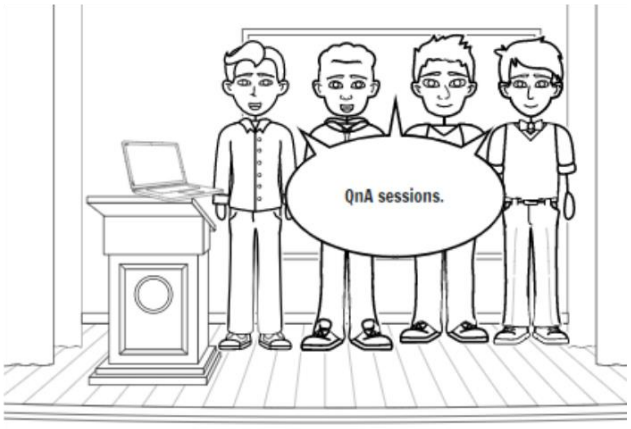
And this is how my friends, AI will take over the world. Thank you.

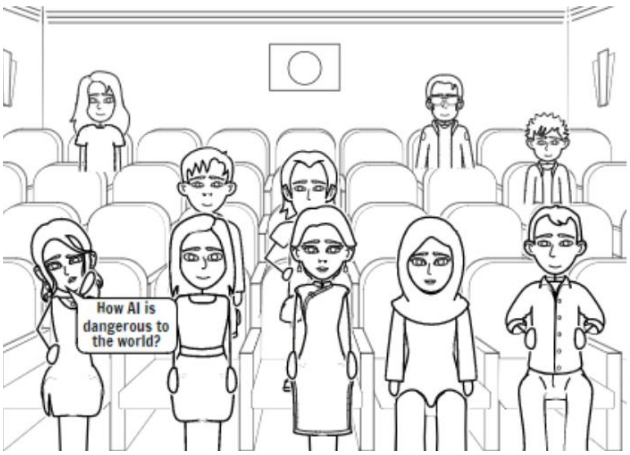
Story boarding

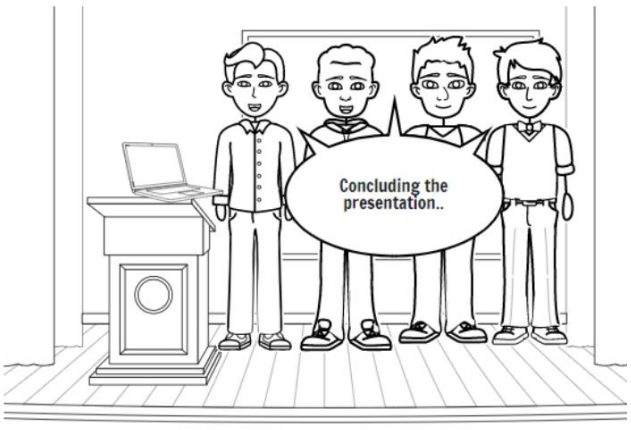












Script

Sufiyaan: Did you know that you have AI in your pocket at this very moment? Did you know that AI will change the face of this world? You probably didn't know. That is why we are here to tell you guys about it.

Ahsan: So, we will speak today about "How Artificial Intelligence will take over the world."

Sufiyaan: Now, I'm going to start with the formal definition of Artificial Intelligence defined by John McCarthy, the creator of AI: So, AI is the process of making intelligent machines. Specifically intelligent computer machines.

This definition does include your mobiles, laptops, calculators etc.

Ahsan: The field of AI was founded by John McCarthy in 1956 at a conference at Dartmouth College, where the term Artificial Intelligence was coined.

Sufiyaan: After that, the period 1974-1980 was called AI winters as there was a shortage of funds for AI researches.

Ahsan: In 1980, Expert Systems were invented.

Sufiyaan: In 1997, IBM Deep Blue beats world chess champion.

Ahsan: By 2006, AI came into business and companies like Facebook, YouTube, and Netflix started using AI.

Sufiyaan: In 2012, Google launched an Andriod App "Google Now", which was able to provide information to the user as a prediction.

Ahsan: A chatbot "Eugene Goostman" won a competition in the infamous "Turing Test" in 2014

Sufiyaan: In 2018, IBM developed a machine called "Project Debator", which debated on complex topics

Ahsan: So, as you can see, AI has developed to a remarkable level.

Sufiyaan: Many people are still confused about what Artificial Intelligence really is? But the answer is straightforward, and it's one sentence; [pause] Artificial Intelligence is a software that writes itself.

Ahsan: Now, you may think that Artificial Intelligence will show its true potential in years to come, but you're mistaken, my friends. It has already demonstrated its capability to be more accurate and more needed in various jobs than humans. For example:

Huzaifa: Automation is one of the most commonly cited benefits of AI technology, and it has had significant impacts on the communications, transportation, consumer products, and service industries. Automation is a machine executing a series of instructions exclusively set by humans.

Talha: Automation not just leads to higher production rates and increased productivity in these sectors but also allows more efficient use of raw materials, improved product quality, reduced lead times, and superior safety.

Huzaifa: So, few examples of AI are Manufacturing Robots, Self Driving Cars, Smart Assistants, and Automated Finance

Talha: Moreover, AI can work 24/7 without any errors, resulting in increased efficiency and productivity.

Huzaifa: The use of Artificial Intelligence solutions in the healthcare sector is becoming increasingly popular. Remote patient monitoring technology, for instance, allows healthcare providers to perform clinical diagnoses and suggest treatments quickly without requiring the patient to visit the hospital in person.

Talha: Surgeons at the Maastricht University Medical Center, Netherlands, utilized AI-assisted robotics to suture very narrow blood vessels of .03 to .08 mm.

Huzaifa: AI can also be beneficial in monitoring the progression of contagious diseases and even predicting their future effects and outcomes.

Talha: Before the world was aware of COVID-19, AI systems had detected the outbreak of an unknown type of pneumonia.

Talha: AI and Machine Learning technology can analyze data much more efficiently. It can help to create predictive models and algorithms to process data and understand the potential outcomes of different trends and scenarios

Huzaifa: Moreover, the advanced computing capabilities of AI can also speed up the processing and analysis of data for research and development, which could have taken too long for humans to review and understand.

Talha: AI is also used in the education sector to assist students in personalized larning and assist teachers in auto-grading. Furthermore, several AI-powered chatbots are built explicitly for education as a sector. They work as students' assistants to provide answers to their queries at any time. So, they don't have to wait to see the prof in their office or the classroom.

Ahsan: Artificial intelligence is impacting the future of virtually every industry and every human being. Artificial intelligence has played the primary driver of emerging technologies like big data, robotics, and IoT. It will continue to act as a technological innovator for the foreseeable future.

Ahsan: Now, I will tell you about the scope of AI. Artificial intelligence is the next big revolution that is changing the world.

It is one of the most exciting and promising technologies of the 21st century. Artificial intelligence affects various industries, including transport, healthcare, e-commerce, etc. It is affecting every domain of life. It is changing the world by making life easy for human beings.

Huzaifa: There has been a 14X increase in the number of active AI startups since 2000.

Talha: 84% of enterprises believe investing in AI will lead to greater competitive advantages.

Sufiyaan: 63% of CEOs predict that AI will positively impact job openings as the internet did when it first became available.

Ahsan: By 2025, growing job demand for 97 million people will be needed for jobs such as AI and machine learning specialists, process automation specialists, prominent data specialists, and more.

Huzaifa: 75% of executives fear going out of business within five years if they don't scale AI.

Talha: The global AI market is predicted to snowball in the next few years, reaching a $190.61 billion market value in 2025.

Sufiyaan: By 2029, search engines will understand the meaning of a search inquiry rather than just digesting keywords.

Ahsan: The turning test (machines can think at human levels) will be passed in 2029.

Huzaifa: By 2030, China will be the world leader in AI technology, with 26.1% of the global market share.

Talha: The estimate is that the majority of the tasks will be performed by AI and machines by the year 2030.

Ahsan: And finally, there is a 31.4 % expected increase in AI-related jobs by 2030.

Sufiyaan: If you guys are confused about how to pursue your career in AI...so don't worry; we have got you covered.

Sufiyaan: So, AI is divided into seven major areas: Data Science, Machine Learning, Neural networks, Robotics, Deep Learning, Expert Systems, and Natural Language Processing. Moreover, there are some fundamentals that you must know to jump into AI. Few of them are

1. Matrices and Linear Algebra
2. Database Basics which includes relational and non-relational databases, SQL, and NoSQL
3. Tabular Data
4. Data Frames and Series
5. and the most important, Python

Sufiyaan: Speaking about Python, Firstly, you must know Python basics as shown in this diagram.

Sufiyaan: In Python, the libraries related to AI are already made. So you don't need to re-invent the wheel and start coding from scratch. Numpy, Pandas, SKLearn are some of the famous libraries in Python

Sufiyaan: Roadmap for AI is itself an entirely different topic. So if you are interested, you may reach us after this presentation.

Huzaifa: You may ask questions now, and we will be more than happy to answer them.

[QnA Session]

Ahsan: There are many more benefits of Artificial Intelligence that span from space exploration to advancements in defence systems and more. AI will be doing our daily tasks, and we humans will have time to be creative, spend time with nature and make this world a better place.

And this is how my friends, AI will take over the world. Thank you.