



# Communication & Presentation (Theory)

## **Group Members:**

Sufiyaan Usmani (21K-3195)

Ahsan Ashraf (21K-3186)

Syed Muhammad Huzaifa (21K-4948)

Talha Shahid (21K-3355)

## **Section:**

BCS-2J

## **Teacher Name:**

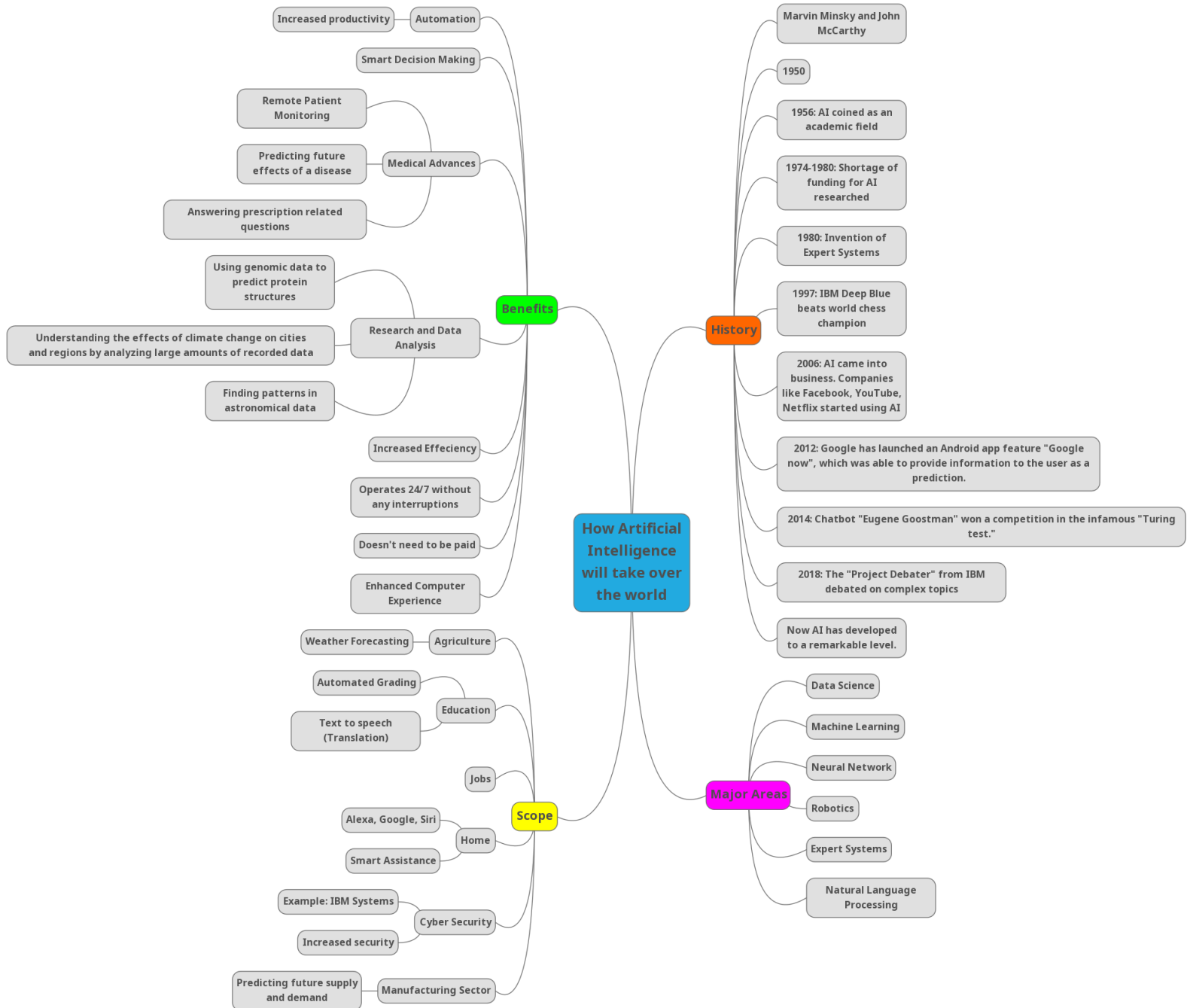
Miss Sabeen Amjad

Selection of Topic: How Artificial Intelligence will take over the world

Audience Profile:

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

## Brainstorming:

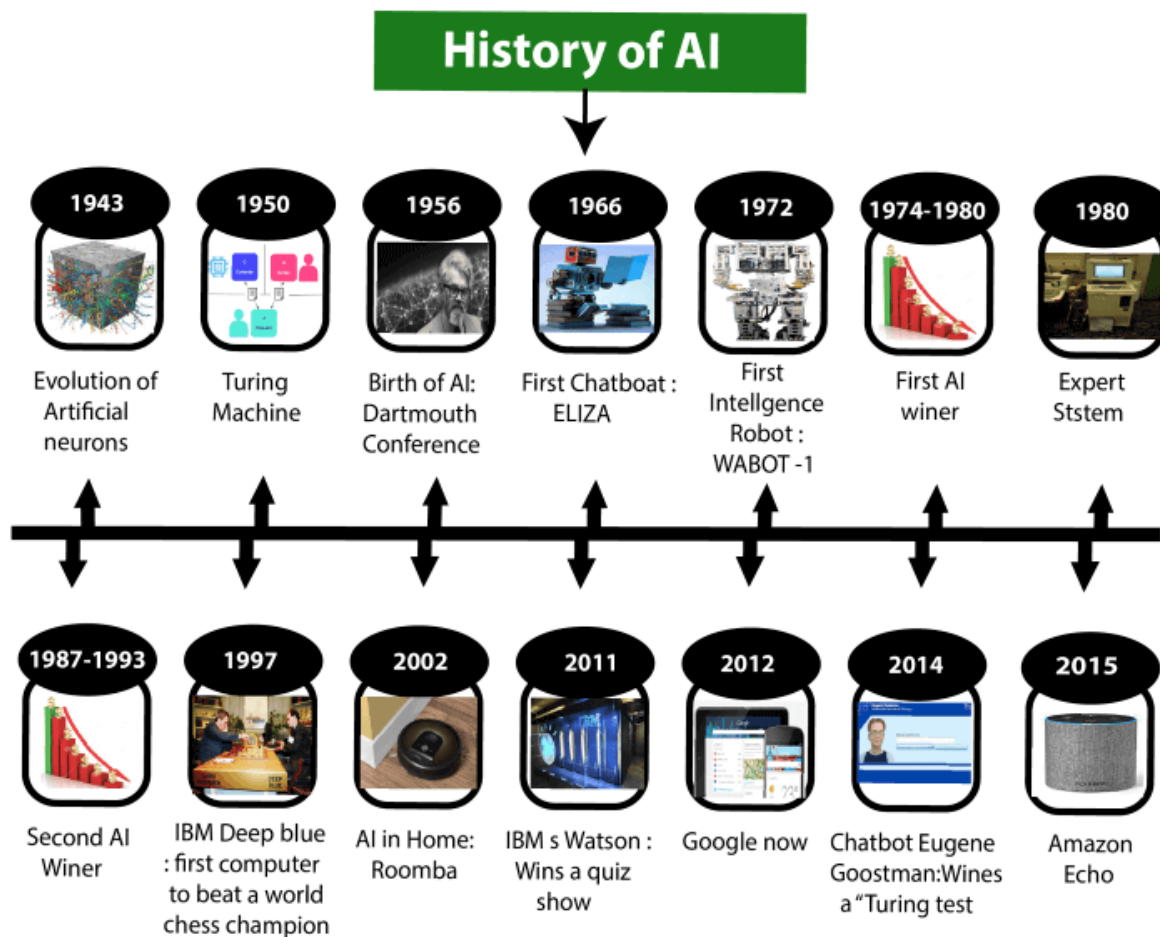


Research:

## 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](https://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:

### 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]**

## 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 \(researchgate.net\)](#)

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. 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 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

Conclusion:

The future of computer science now lies in Artificial Intelligence.