

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

COMMUNICATION SKILLS-II

Unit-1

CLASS 10

1. You are asked to give a group presentation. What communication skills would you use and why?

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2. During a group project, one team member misunderstands your instruction. How would you use communication skills to resolve the issue?

.....

3. A friend misunderstood your WhatsApp message and got upset. How would you resolve the issue using communication strategies?

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.....

4. Name the 7Cs of Communication in the figure given below:



.....



.....



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Grade:



Teacher's Signature: _____

Part A

COMMUNICATION SKILLS-II

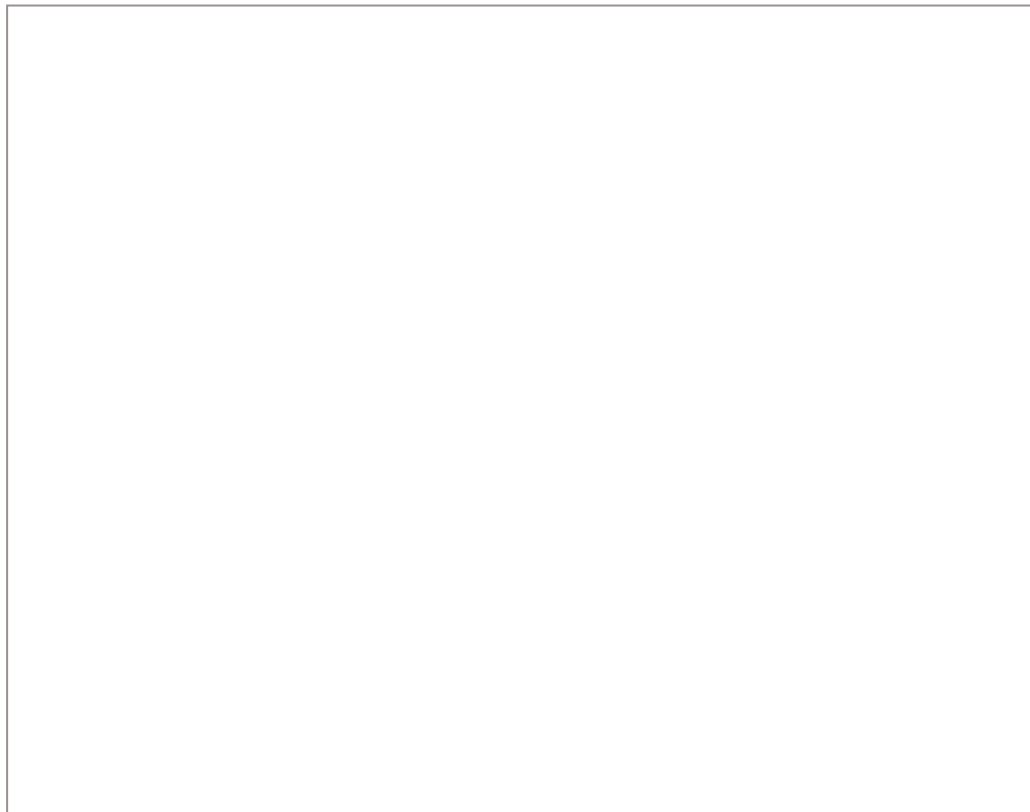
1. You are attending a job interview. What verbal and non-verbal communication skills would you use to make a good impression?

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2. Draw a flowchart to explain what is "Sentence" made up of?



3. You're writing a formal email to your teacher asking for help with an assignment. How will you ensure the tone is respectful and the message is clear?

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Unit-2

CLASS 10

SELF-MANAGEMENT SKILLS-II

1. You have multiple assignments to submit, but a limited time. How will you manage your time effectively?

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.....

2. Complete the differences in the following table. The first one has already been done for you.

| Interests | Abilities |
|---|-----------------------------------|
| Things that you like to do in your free time that make you happy. | An acquired, or natural capacity. |
| | |
| | |
| | |

3. If you had to complete an important task alone, with no help, what strengths would you use, and how would working independently help you grow?

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SELF-MANAGEMENT SKILLS-II

Unit-2

CLASS 10

Part A

1. A friend lacks confidence in public speaking. How can you help them build their self-confidence using techniques from this unit?

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2. Identify the mistakes made by the following students in setting their goals. Justify your answer.

- a. "I will win a national chess championship this year," but Ravi has never participated in a school or state-level competition before.

.....

- b. "My goal is to be successful and known by everyone one day."

.....

- c. "I will practice math whenever I get time so I can be better at it."

.....

3. Assertion-Reason questions.

Choose the correct option for a. and b.

A. Both A and R are true, and R is the correct explanation of A.

B. Both A and R are true, but R is not the correct explanation of A.

C. A is true, but R is false.

D. A is false, but R is true.

- a. Assertion (A): Emotionally intelligent people are better at handling stressful situations and building strong relationships.

Reason (R): Emotional Intelligence only means being aware of your own emotions and expressing them freely without controlling them.

.....

- b. Assertion (A): Self-awareness helps a person manage emotions and build better relationships in both personal and professional life.

Reason (R): Self-awareness is only about knowing your strengths and ignoring your weaknesses.

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**ARTIFICIAL
INTELLIGENCE**

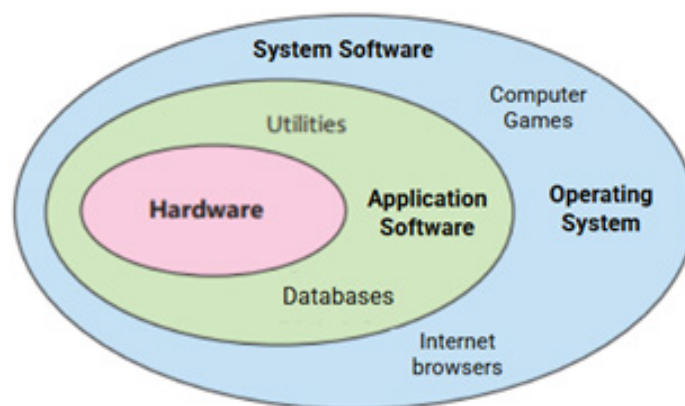
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INFORMATION & COMMUNICATION TECHNOLOGY SKILLS-II

Unit-3

CLASS 10

1. Correct the following:



2. Write the steps for the following:

a. Login and Logout

.....

.....

b. Creating a folder

.....

.....

3. Your friend is experiencing performance issues because he doesn't maintain his computer properly. You decide to help by creating a computer maintenance plan to keep it running smoothly.

Prepare a maintenance checklist outlining the tasks that should be done on a daily, weekly, monthly, quarterly, and yearly basis to ensure optimal computer performance.

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Part A

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INFORMATION & COMMUNICATION TECHNOLOGY SKILLS-II

Unit-3

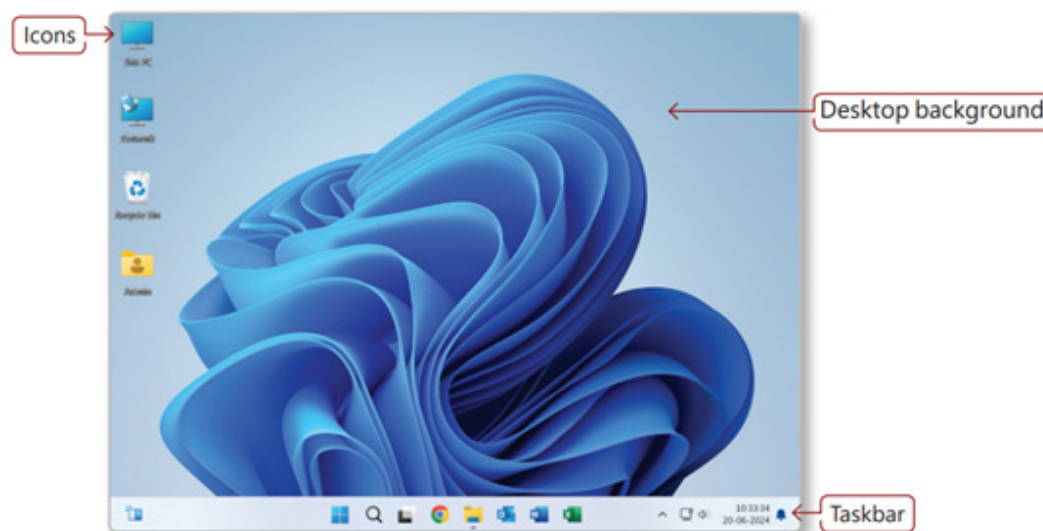
CLASS 10

1. "Tejas is very careless about his computer and doesn't understand how important it is to protect it from viruses." As his friend Vani, explain to him why computer security is important and what precautions he should take to keep his computer safe.

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2.



Part A

Elaborate on the labelled components of Windows 11 from the above image.

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3 Short Answer Questions (30-40 words each)

a. Define Distributed Operating System.

.....

.....

b. Write any 2 ways to keep your mouse clean.

.....

.....

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ENTREPRENEURIAL SKILLS-II

Unit-4

CLASS 10

Part A

- Imagine you are an entrepreneur planning to launch a new product, but you're unsure if the market is ready for it. How would you make a thoughtful decision to avoid risk and ensure the success of your business?

.....

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- Riya works in a factory and receives a fixed monthly salary. Kabir runs a graphic design business independently, and Ananya started a tech company that now employs 10 people. Identify who among them is a wage employee, who is self-employed, and who is an entrepreneur. Give reasons for your answer.

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- Do you think someone with no business background, limited money, and a common idea can still become a successful entrepreneur? Justify your answer.

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ENTREPRENEURIAL SKILLS-II

Unit-4

CLASS 10

- Imagine you are an entrepreneur in your town. You want to start a business that uses local resources, helps people, and supports the country's development. What kind of business would you start, and how would you make sure it meets customer needs, benefits society, and uses local materials wisely?

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- Assertion Reason Questions

Choose the correct option for the given question:

- Both A and R are true, and R is the correct explanation of A.
- Both A and R are true, but R is not the correct explanation of A.
- A is true, but R is false.
- A is false, but R is true.

Assertion (A): A successful entrepreneur is hardworking because they know that dedication is key to business success.

Reason (R): Entrepreneurs only work during regular office hours to maintain a work-life balance.

- "Meera started a sustainable fashion brand, but her first collection didn't sell well due to strong competition and limited marketing." What entrepreneurial risk is Meera experiencing, and what could she do differently next time?

.....

.....

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GREEN SKILLS-II

1. Describe the given image:



2. Short Answer Questions (30-40 words each)

a. Define Sustainable Development.

b. What is Goal 1 of Sustainable Development?

3. Piya, a student passionate about the environment, enrolled in a course under the Green Skills Development Programme launched in 2017. With the knowledge gained, she began helping local businesses adopt sustainable practices. As Piya, explain to your class how green skills can contribute to both individual growth and national environmental goals.

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Unit-5

CLASS 10

GREEN SKILLS-II

- 1 Gauri lives in a city that struggles with waste management, traffic congestion, and water pollution. Inspired by the idea of sustainable development, she decides to design a "Green City Blueprint" that focuses on clean energy, smart transport, and community equality.

If you were asked to help Gauri, what three sustainable ideas would you include in the blueprint to improve the city's future for all generations?

.....

.....

2. Assertion Reason Question.

Choose the correct option for the given question.

- A. Both A and R are true, and R is the correct explanation of A.
- B. Both A and R are true, but R is not the correct explanation of A.
- C. A is true, but R is false.
- D. A is false, but R is true.

- a. Assertion (A): Excessive use of fossil fuels and deforestation contribute significantly to climate change and environmental degradation.

Reason (R): Sustainable development encourages the use of renewable resources, recycling, and eco-friendly technologies to minimise environmental impact.

3. Identify the problems related to Sustainable Development by looking at the following pictures:



.....

.....

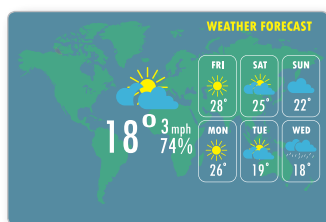
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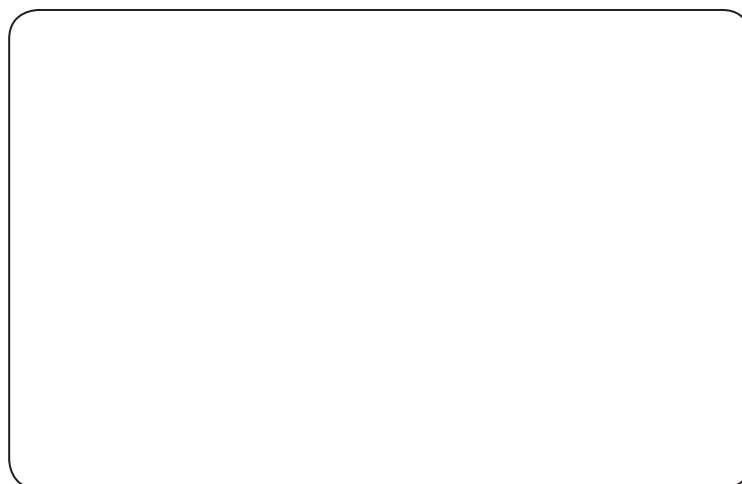
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REVISITING AI PROJECT CYCLE & ETHICAL FRAMEWORKS FOR AI

A. Identify the AI domains from the following images:



B. Draw a flowchart to represent types of Ethical Frameworks.



C. Answer the following questions in brief.

1. A social media platform wants to detect and block harmful comments automatically. How does NLP assist in achieving this?
.....
2. A cloud service provider is powering AI systems that help businesses make decisions. However, the environmental impact of running these systems is significant due to high electricity consumption. What steps can the provider take to reduce the environmental impact of its AI infrastructure?
.....

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Unit-1

CLASS 10

REVISITING AI PROJECT CYCLE & ETHICAL FRAMEWORKS FOR AI

A. Justify the following statements in brief:

1. Price comparison websites are platforms that allow users to compare prices of products or services offered by multiple sellers.
.....
2. Gmail ensures that potentially harmful or irrelevant emails are directed to the Spam folder.
.....
3. Google Assistant or Siri can quickly tell you the weather. Just ask, "What's the weather like today?"
.....

B. Draw a diagram to display the stages of the AI project cycle.



- C. TechCo is a mid-sized technology company with a strong focus on software development and AI research. While 30% of their workforce consists of women, the number drops drastically in technical roles, such as software engineers and data scientists, where only 15% are women. The company has recently introduced programs like mentorship for women in tech, unconscious bias training, and flexible work hours. However, the gender gap in technical roles persists, and many women report a lack of career advancement opportunities.

Using the 4W Canvas, answer the following questions about TechCo's gender disparity issue:

1. Who are the key stakeholders involved in this issue at TechCo?
.....
2. What challenges does TechCo face in achieving gender equality in technical roles?
.....
3. Why is it important for TechCo to address these challenges?
.....

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ARTIFICIAL INTELLIGENCE

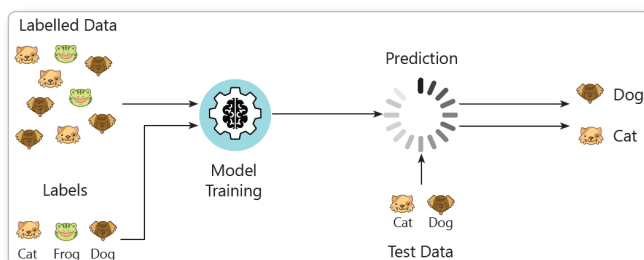
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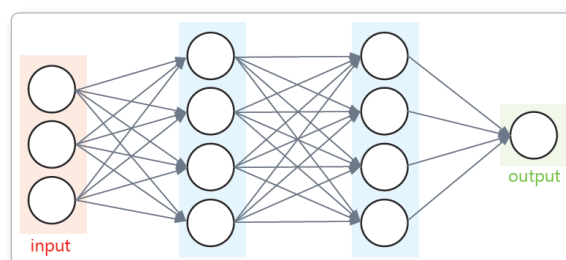
Unit-2

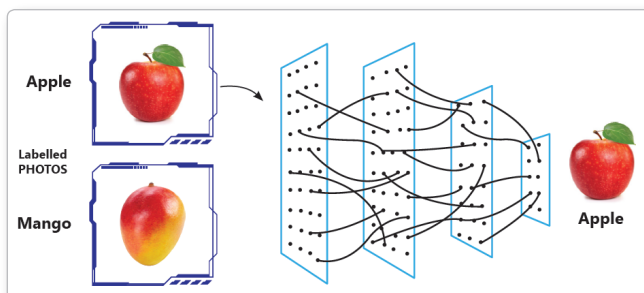
CLASS 10

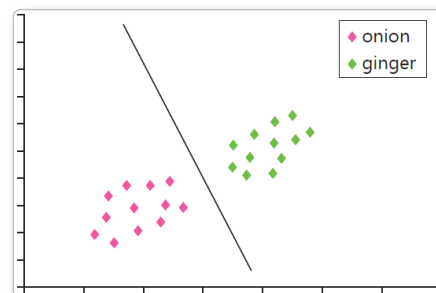
ADVANCED CONCEPTS OF MODELING IN AI

A. Identify the following images.









B. Draw a flowchart to depict summary of ML Models.

C. Give an example of a rule based chatbot made by a grade 10th student to help choose subjects for grade 11th.

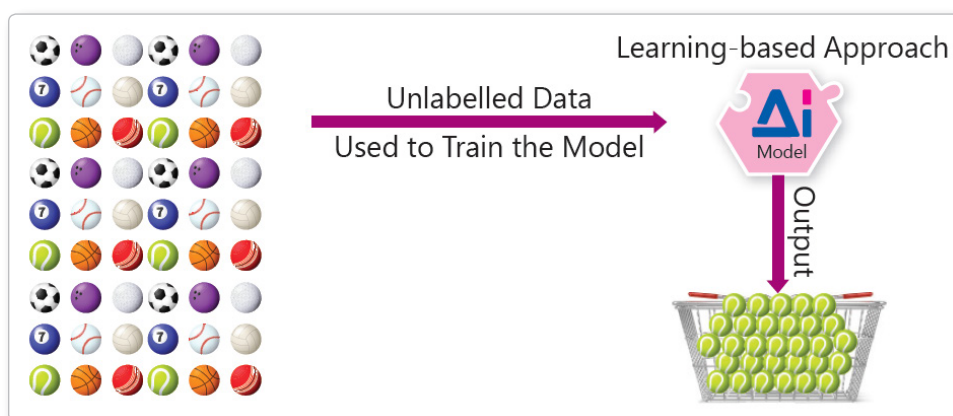
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ADVANCED CONCEPTS OF MODELING IN AI

A. Explain the concept depicted in the image given below:



B. You are creating a machine learning model to predict whether a student will pass or fail an exam based on their study hours, class participation, and past academic performance. You have gathered data for 500 students, with features like study hours, class participation, and previous grades, and a label indicating whether they passed (1) or failed (0) the exam.

To build your model, you decide to provide the following dataset

- Training dataset: 400 records
- Testing dataset: 100 records

Based on the above information answer the following questions:

1. What will be the result of the model if both the testing dataset and training dataset are the same?
2. Why do you need to evaluate the model with a separate testing dataset after it is trained?
3. How does the trained dataset differ from the training dataset in terms of its usage?

EVALUATING MODELS

A. You are working as a data scientist for a retail company. Your task is to develop a machine learning model that predicts whether a customer will purchase a product based on their age and monthly income. You have collected a dataset with 1000 records, each containing the customer's age, monthly income, and whether they made a purchase (Yes/No).

To build and evaluate the model, you decide to split the dataset into a training set and a testing set using the train-test split technique.

1. How would you split the dataset into a training set and a testing set?

.....

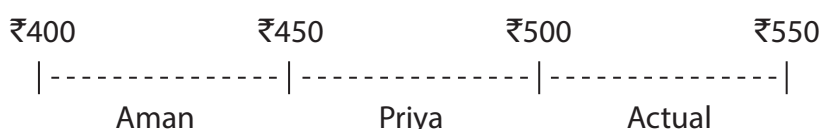
2. Explain why it is important to have this split.

.....

3. You decide to use a 80-20 split. How many records will go into the training set and how many into the testing set?

.....

B. Below is a number line showing the actual price of rice and the price estimates by Aman and Priya:



1. Looking at the number line, who is closer to the actual price?

.....

2. Estimate visually whose error is smaller and explain why.

.....

3. If these points represented predictions made by two machine learning models, which model would be considered more accurate?

.....

4. If a third person, Riya, estimated ₹600 for the rice bag, plot her estimate on the number line. Who among Aman, Priya, and Riya would have the highest error?

.....

EVALUATING MODELS

A. Match the following business goals with the suitable evaluation metrics.

| Business Goal | Evaluation Metric |
|--|-------------------|
| 1. You want very few actual buyers to be wrongly predicted as non-buyers. | i. Recall |
| 2. You want predictions of buyers to be highly trustworthy (few false alarms) | ii. Precision |
| 3. You want an overall good balance between Precision and Recall. | iii. F1-Score |
| 4. You want the model to perform well in general, without focusing much on any error type. | iv. Accuracy |

B. You are part of a team working on a machine learning model to predict whether a customer will purchase a product based on their past purchase history, age, and browsing behaviour on the website. Your dataset consists of 100,000 user records with labelled data (purchased or not purchased). After training and evaluating the model, you notice the following behaviours:

- **Overfitting Model:** The model achieves 95% accuracy on the training data but only 60% accuracy on the test data.
- **Underfitting Model:** The model achieves 70% accuracy on both the training data and test data.
- **Perfect Fit Model:** The model achieves 85% accuracy on both the training data and test data.

Answer the following questions

- What could be the reason for the Overfitting Model's high accuracy on the training data but low accuracy on the test data?
.....
- Why is the Underfitting Model performing poorly on both the training and test data?
.....
- If you were to deploy one of these models into production, which one would you choose and why?
.....

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Unit-4

CLASS 10

STATISTICAL DATA

A. What is my name?

1. 
2. 
3. 
4. 
5. 
6. 

B. How can statistics be useful in real life?

.....

.....

C. Suppose you have a dataset of student marks. How would you decide which measure (mean, median, or mode) best represents the performance?

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COMPUTER VISION

- A. Imagine a new shopping mall that uses facial recognition for entry. What are two ways this could make shopping more convenient for customers?

.....

.....

- B. Design a smart home feature that uses facial recognition in a new, helpful way.



- C. A city called SmartTown has recently installed facial recognition systems at the entrances of schools, shopping malls, and residential buildings. The goal is to make the city safer by identifying unknown visitors and helping find missing persons quickly. However, some residents are concerned about their privacy and the misuse of personal data.

The city plans to organize a meeting where people can suggest improvements or raise concerns.

- How does facial recognition make life more convenient and secure for SmartTown's residents?
.....
- What are two major concerns residents might have about installing facial recognition everywhere in the city?
.....
- Suggest one way SmartTown could balance safety and privacy to make people feel more comfortable with the technology.
.....

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COMPUTER VISION

Unit-5

CLASS 10

A. Imagine a hospital without computer vision in medical imaging. What challenges might doctors face in diagnosing diseases?

.....

B. What technology does the Google Translate app use to recognize text from images?

.....

C. Why do we split coloured images into three separate channels (Red, Green, Blue) for storage and processing?

.....

D. You are designing a smart app for tourists.

It should instantly translate not just signs but also posters, menus, and product labels in crowded markets.

1. Which computer vision techniques would you include: OCR, classification, object detection, instance segmentation?

.....

2. Briefly explain why you chose each one.

.....

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Part B

NATURAL LANGUAGE PROCESSING

A. Imagine you have a lot of customer feedback from an online store. Which NLP technique would you use to find out if customers are happy or upset? Explain your choice in brief.

.....

.....

B. Social media analytics wants to understand how people are reacting to a new product launched by their company. They receive thousands of comments daily across Facebook, Instagram, and LinkedIn.

1. Which NLP technique should the manager use to find out if the comments are positive or negative?

.....

2. How will this technique help the company improve?

.....

.....

C. Imagine you are designing your own chatbot to help students study. What 2 cool features would you add to make it smarter?

Imagine you're building a chatbot that helps people order pizza online.

Draw or describe:

- What will the chatbot ask first?
- How will it help customers choose toppings?
- What funny or helpful phrases could it use?



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Unit-6

CLASS 10

NATURAL LANGUAGE PROCESSING

A. What's my name?

1. I split a long paragraph into multiple sentences.
2. I remove extra symbols like #, @, \$, and numbers if not needed.
3. I understand context and have human-like conversations.
4. I am a chatbot that follows a fixed path or script.
5. I make sure words like 'RUN' and 'run' are treated the same.

B. A student is traveling to a foreign country. They cannot read the road signs or restaurant menus because they are in another language. They decide to use their phone camera to translate the text instantly.

1. Which two technologies are working behind this feature?

2. How does it make travel easier for the student?

C. What would happen if we don't remove stopwords before data processing?

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