

ICT PRACTICAL WORKSHEET - STD VIII

Worksheet No	6.1
Name of Chapter	Machines That Learn
Name of Activity	Introduction to Machine Learning and Pattern Recognition
Software Used	None (Offline Activity)
Time	40 Minutes

Order of Events

Observing Patterns	Look at the patterns in Table 6.1 (Group A and Group B).
Identifying Features	List the similarities and differences between the patterns in both groups.
Classifying New Patterns	Use Table 6.2 to classify new patterns into Group A or Group B based on their features.
Recording Observations	Fill in Table 6.3 with the similarities and differences you identified.
Reflecting on the Process	Write a short note on the steps you followed to classify the patterns.
Saving Notes	Save your observations as Pattern_Classification_Notes.txt .
Finishing	Keep your notes ready for discussion.

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Worksheet No	6.2
Name of Chapter	Machines That Learn
Name of Activity	Creating an Image Classifier for Sign Language
Software Used	PictoBlox
Time	40 Minutes

Order of Events

Opening ML Environment	Open PictoBlox → File → Open ML Environment.
Creating a New Project	Click Create New Project → Select Image Classifier .
Naming the Project	Enter Project Name: ISL_ABC → Click Create Project .
Adding Classes	Use Add Class to create four classes: A, B, C, None .
Capturing Images	Use the Webcam to capture 200–500 images for each class (A, B, C, None).
Saving the Dataset	Ensure all images are properly labeled and saved.
Finishing	Keep the ML Environment open for the next worksheet.

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Worksheet No	6.3
Name of Chapter	Machines That Learn
Name of Activity	Training and Testing the Model
Software Used	PictoBlox
Time	40 Minutes

Order of Events

Training the Model	In the ML Environment, click Train Model (JavaScript) .
Observing Training	Wait for training to complete. Observe the Accuracy vs Epochs graph.
Testing the Model	Click Testing → Webcam . Show hand signs for A, B, C one by one.
Evaluating Performance	Check the Output window to see if the model correctly identifies the signs.
Improving the Model	If accuracy is low, add more images or remove unclear ones and retrain.
Exporting the Model	Click Export Model to save the trained model for use in PictoBlox.
Saving the Project	Save the project as ISL_Model.sb3 .

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Worksheet No	6.4
Name of Chapter	Machines That Learn
Name of Activity	Building an ISL Game
Software Used	PictoBlox
Time	40 Minutes

Order of Events

Importing the Model	Go to ML Environment → Open ISL_ABC → Click Export Model .
Adding Sprites	Add Alphabet sprite and costumes: A, B, C, Success .
Coding the Game	Use code blocks to: - Turn on camera - Show random letters - Check if hand sign matches - Play sound and show tick for correct answers
Testing the Game	Run the game and test with hand signs for A, B, C.