

UNDERSTANDING INTELLIGENT SYSTEMS FOR EVERYDAY LIFE

Objective

Understand how Artificial Intelligence and Machine Learning are applied in daily life and future systems, and demonstrate intelligent decision-making using Python programming and control flow logic aligned with sustainability goals.

Session 1: AI Concepts and Intelligent Behaviour

Activities

1. Understanding Artificial Intelligence

◊ Task

- ✦ Students will explore the meaning of Artificial Intelligence, and the classification of AI. They will analyse examples such as smile detection and arrow detection to understand how machines identify patterns.

◊ Skills Practised

- ✦ Differentiating human intelligence and artificial intelligence
- ✦ Understanding AI classifications
- ✦ Analysing behaviour-based AI systems

2. Exploring AI Domains

◊ Task

- ✦ Students will study AI domains such as Data, Natural Language Processing, and Computer Vision, and connect each domain to real-world examples like facial expression recognition.

◊ Skills Practised

- ✦ Identifying AI domains
- ✦ Connecting domains to applications
- ✦ Understanding the role of data in AI systems



Outcome for Session 1

- ◊ Clear conceptual understanding of AI and its domains.
- ◊ Real-life examples mapped to AI concepts.

Session 2: Machine Learning, Sustainability, and the Future

Activities

1. Machine Learning and Pattern Recognition

◊ Task

- ✦ Students will explore how machine learning works through applications such as up and down arrow detection, focusing on how systems learn from repeated inputs.

◊ Skills Practised

- ✦ Understanding the learning process in machines
- ✦ Identifying patterns and predictions
- ✦ Connecting ML to automation

2. AI for Sustainable Development

◊ Task

- ✦ Students will study Sustainable Development Goals and analyse how AI supports smart cities, smart schools, and smart homes in achieving sustainability.

◊ Skills Practised

- ✦ Understanding SDGs
- ✦ Analysing AI-driven smart systems
- ✦ Evaluating the future role of AI

Outcome for Session 2

- ◊ Understanding of machine learning applications.
- ◊ Clear connection between AI and sustainability.

Session 3: Logical Decision-Making Using Python

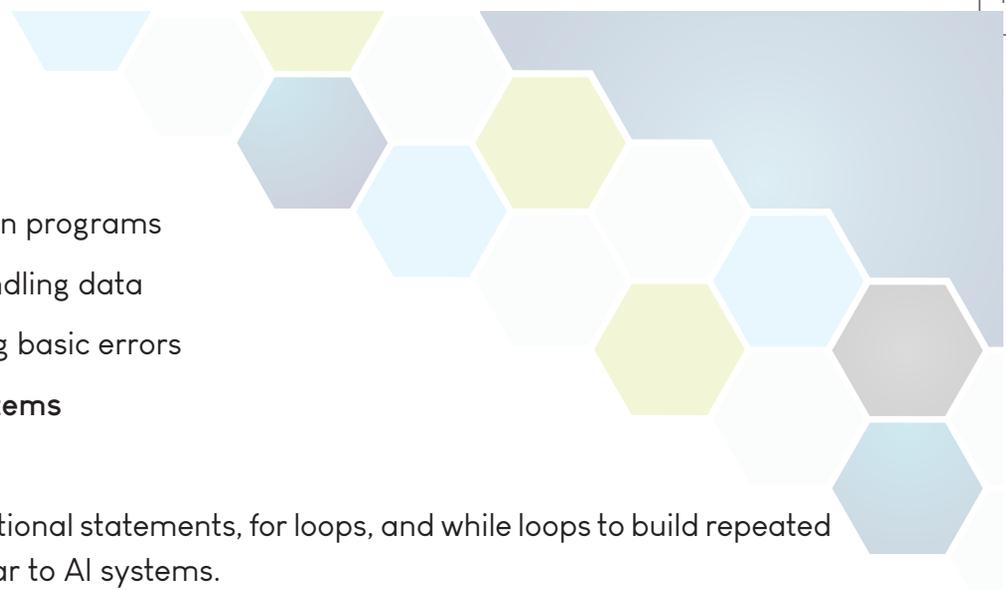
Activities

1. Building AI-Style Logic with Python Basics

◊ Task

- ✦ Students will write Python programs using variables, data types, operators, input, and output to simulate intelligent decisions such as classification or response-based outputs.





❖ Skills Practised

- ✦ Writing structured Python programs
- ✦ Using operators and handling data
- ✦ Understanding and fixing basic errors

2. Control Flow for Intelligent Systems

❖ Task

- ✦ Students will apply conditional statements, for loops, and while loops to build repeated decision processes similar to AI systems.

❖ Skills Practised

- ✦ Applying sequential, conditional, and iterative logic
- ✦ Using loops for repeated evaluation
- ✦ Designing rule-based decision systems

Outcome for Session 3

- ❖ Python programs demonstrating intelligent decision logic.
- ❖ Clear use of control flow statements.

Final Deliverables

Tick (✓) the box if submitted:

- ❖ Concept notes on AI, machine learning, and AI domains.
- ❖ Analysis of AI use in smart and sustainable systems.
- ❖ Python programs using control flow to simulate intelligence.
- ❖ A structured presentation on AI in real life and the future.



This project integrates AI concepts, machine learning applications, sustainability goals, and Python-based logic to demonstrate how intelligent systems support informed decisions and future-ready solutions.