Lesson Plan: Build a Mood2Emoji App (Intro to Text Classification)

Target Age Group: 12–16 years

Duration: 60 minutes

Technology Used: Python, Streamlit, TextBlob (or rule-based logic)

Learning Goals

- Understand how computers detect moods or emotions in text.
- Learn the basics of Natural Language Processing (NLP) and text classification.
- Build a simple rule-based app using Streamlit to classify moods into emojis.
- Encourage safe and positive use of AI tools.

Topics Introduced

- What is sentiment or mood detection?
- Understanding positive, negative, and neutral text.
- Introduction to rule-based classification and simple logic building.
- How web apps work using Streamlit.
- Importance of AI safety and content filtering.

Detailed Lesson Plan (60 Minutes)

- **0–10 min:** Introduction to text emotions and emoji representation.
- **10–25 min:** Explain how mood detection works using positive/negative word lists or TextBlob polarity.
- **25–45 min:** Code along – Build the Mood2Emoji app using Streamlit and run simple examples.
- **45–55 min:** Enable Teacher Mode to show the working diagram and explain safety filters.
- **55–60 min:** Wrap-up discussion on AI safety, limitations, and creative ideas to extend the project.

Activity Explanation

Students will write simple sentences (e.g., 'I love this game!' or 'I am tired today.') and the app will display an emoji with an explanation like 'Sounds happy!' or 'Seems sad.' In Teacher Mode, a basic diagram explains how the system uses keywords or TextBlob polarity to classify moods. The focus is on learning logic, not complex AI models.

Learning Outcomes

- Students understand how computers interpret emotions from text.
- Students can build a basic interactive web app using Streamlit.
- Students recognize the importance of filtering inappropriate content.
- Students gain curiosity about AI and NLP for creative applications.

Conclusion

This 60-minute session blends creativity, logic, and technology to help students learn how AI interprets human language safely. By building the Mood2Emoji app, learners take their first step into Natural Language Processing while understanding the importance of ethical and responsible AI use.