Lesson Plan: Build a Mood2Emoji App (Ages 12–16)

Duration: 60 minutes
Topic: Introduction to AI and Text Sentiment
Project: *Mood2Emoji — A Kid-Safe Text Mood Detector*
Tech Stack: Python, Streamlit, TextBlob
Final Goal: Build a simple app that reads a sentence and replies with 😀 😐 😞.

Lesson Objectives

By the end of this lesson, students will:

- Understand how AI reads emotion in text (*sentiment analysis*)
- Build and test a simple Streamlit app
- Learn about *ethical AI* and empathy in design.

Topics Introduced

1. **AI Sentiment Analysis** — how machines read feelings in text.
2. **Text Polarity** — positive (+1), neutral (0), negative (–1).
3. **Emoji Mapping** — linking emotions to 😀 😐 😞.
4. **Safety Filters** — blocking bad words, detecting shouting.
5. **Flow Logic** — text → safety check → sentiment → emoji.

Topics in Detail

- **Text Analysis:**
  Students learn that *TextBlob* analyzes each sentence and assigns a *polarity score* between **-1 (negative)** and **+1 (positive)**. They'll see how this number

tells the computer whether the message sounds happy, sad, or neutral.

- **Conditionals in Python:**
  The app uses simple `if`, `elif`, and `else` statements to choose the right emoji. This helps students understand how decision-making works in programs — just like "if this, then that."

- **Responsible AI:**
  Students explore how technology can promote kindness. The app filters rude words and discourages shouting, teaching that AI should communicate respectfully and protect users from harmful content.

- **User Experience:**
  Students observe how an emoji paired with a short message ("Sounds happy!") makes feedback more human and easier to understand. They learn that *how* AI responds matters as much as *what* it says.

Activity Explanation

Time	Teacher Actions	Student Activities
0–10 min	Introduce *sentiment analysis* with examples like "I love pizza!" vs. "I hate pizza."	Guess the emotions behind each sentence.
10–25 min	Demo the **Mood2Emoji** app and explain its filters.	Predict which emoji will appear.
25–45 min	Show the code: safety check → sentiment → emoji.	Type different sentences and observe results.
45–55 min	Turn on *Teacher Mode* to display the flowchart.	Sketch their own app logic.

55–60 min	Discuss AI ethics and empathy.	Share reflections or ideas to improve the app.

Learning Outcomes

After completing this lesson, students will:

- Build a simple AI app using **Python + Streamlit**.
- Explain how **TextBlob** measures text sentiment.
- Identify how AI can respond **safely and empathetically**.
- Recognize why language tone matters in online interactions.

I hope this small project helps students see how AI can understand and respond in simple steps.

Author

Khaja Moinuddin Shaik Mohammed
For Codingal Curriculum Developer Intern (AI & Coding) Assignment