1. END to END LESSON PLAN

Mood to Emoji app (intro to text classification) - 60 Minutes

Part 1: Introduction (~10 minutes)

- How do you know if someone is happy from a text message?
- Show real examples of mood detection in apps
- Demo the Mood2Emoji app with fun sentences

Part 2: Hands-On Discovery (~20 minutes)

- Students explore the app in pairs
- “Mood to Emoji" worksheet activity
- Share discoveries with class

Part 3: How It Works (~15 minutes)

- Simple explanation of the magic behind it
- Turn on Teacher Mode together
- Quick vocabulary building

Part 4: Real World use (~15 minutes)

- "Where else do we see this?" discussion
- Cool jobs that use this technology
- Exit ticket & final thoughts

2. LIST TOPICS INTRODUCED

Simple Concepts Students Will Learn:

- Feeling Detection: How computers guess emotions from words
- Word Patterns: Happy words vs. sad words vs. neutral words
- Computer Safety: Why we need to be careful what we share
- Clear Communication: Why some sentences work better than others

Cool Technical Stuff You'll Discover:

- Machine Learning: How computers learn from thousands of examples
- Artificial Intelligence: This is the brain created by humans and inserted into computer.
- Sentiment Analysis: The computer science name for "feeling detection"
- Natural Language Processing (NLP): How computers read human language
- Polarity Scores: The secret number system (-1 to +1) that decides your emoji
- Tokenization: How computers break sentences into individual words

3. TOPICS IN DETAIL

Feelings detection made simple

How it works in kid-friendly terms:

- Computers have a "feeling dictionary" with thousands of words
- Each word gets a "happiness score" (we call this polarity)
- The computer adds up all the scores in your sentence
- Final score decides which emoji to show

EXAMPLE
"I love pizza and video games!" = Score: +0.8 = Happy
"I lost my phone and have homework" = Score: -0.6 = Sad
"The chair is brown" = Score: 0.0 = Neutral

Word Patterns & The Magic Behind Them

How computers actually learn:
- They study millions of sentences from books, websites, and social media
- They learn that "amazing" usually appears in happy contexts
- They notice that "worried" often shows up in concerned messages
- This is called machine learning - computers learning from examples!

Happy words & their secret scores:
- love (+0.8), amazing (+0.7), great (+0.6), excited (+0.5)

Concern words & their secret scores:
- worried (-0.6), sad (-0.7), lost (-0.5), difficult (-0.4)

4. ACTIVITY EXPLANATION

Main Activity: "Mood Detective Challenge"

Setup: Students work in pairs with one computer/tablet per pair

Part A: Pattern Hunt (10 minutes)

Happy Sentence Examples:

- "I aced my math test today!" (Computer sees: "aced"=+0.6, "math test"=neutral)
- "Summer vacation starts next week!" (Computer sees: "vacation"=+0.7)

Concern Sentence Examples:

- "I'm worried about the science test" (Computer sees: "worried"=-0.6)
- "My favorite show got cancelled" (Computer sees: "cancelled"=-0.5)

Neutral Sentence Examples:

- "My backpack is blue" (All words are neutral)
- "We have art class on Fridays" (All words are neutral)

Worksheet Questions:

- What is Machine Learning?
- What patterns did you notice in happy sentences?
- What words often appear in concern sentences?
- Were there any surprises where the computer got it wrong?
- Can you guess the "secret score" for different words?

Quick Activity:

Teacher gives students 3 words with simple scores: "love"(+1), "homework"(0), "tired"(-1)
Students calculate scores for sample sentences
They experience being the "feeling detector"

Example:
Sentence: "I love homework but I'm tired"
Calculation: love(+1) + homework(0) + tired(-1) = 0 (neutral)
Result: Neutral

5. LEARNING OUTCOMES

By the end of this lesson, students will be able to:

Explain the Basics

- Describe in their own words how computers detect feelings in text.
- Give 2-3 real-world examples of where this technology is used.
- Explain why computers sometimes get confused.

Use the Technology

- Successfully use the Mood2Emoji app to analyze different sentences.
- Identify patterns in what makes sentences happy, neutral, or concerning.
- Understand when to use Teacher Mode for learning.

Think Like Programmers

- Understand basic sentiment analysis concepts.
- Explain what polarity scores are in simple terms.
- Describe how machine learning helps computers understand language.
- Recognize the importance of safety filters in technology.