RECAP

Key points to remember

- Machines require systems called natural language processing (NLP) to understand human language. Human language is unstructured. In NLP, machines segment sentences into small chunks of information, called a token. Machines classify and sort tokens into a structure so NLP can work with them to extract meaning.
- With IBM Project Debater, the goal was to build an AI system that could help people make evidence-based, bias-free decisions on difficult topics where the answers aren’t obvious.
- The four steps a debater AI system takes include:
  - Step 1: Learn and understand the topic
  - Step 2: Build a position
  - Step 3: Organize your proof
  - Step 4: Respond to your opponent
- Emotion detection identifies distinct human emotion types. AI can be trained to classify emotions.
- Sentiment analysis is a measure of the strength of an emotion. It results in assessing if data is positive, negative, or neutral.

- Chatbots are ready to answer your questions!
    - The frontend interacts with the person asking questions. It listens (or reads) and speaks (or presents text).
    - The backend operates application logic and has enough memory to remember earlier parts of a conversation as dialog continues.
- A chatbot identifies entities and intents, then uses what it has found to trigger a dialog.
    - An intent is a purpose, or the reason why a user is contacting the chatbot. Think of it as a verb or action to take.
    - An entity is a person, place, or thing. Think of it as a noun.
    - A dialog is a flowchart that illustrates the chatbot replies to the user intents.
- With a convolutional neural network (CNN), an AI system can analyze images. With a generative adversarial network (GAN), an AI system can create new drawings and photos.
- NLP and computer vision can be useful ways to extend human expertise.