

What does this text tell us?

Text analysis discovers meaning, patterns, and labels in existing language.

Common outputs

- Keywords and key phrases
- Named entities
- Sentiment
- Categories
- Summaries

Key message

Text goes in. Meaning or metadata comes out.

Four capabilities AI-901 expects you to recognize

Keyphrase extraction

What are the important topics?

Named-entity recognition

Who, what, and where are mentioned?

Sentiment analysis

What attitude or opinion is expressed?

Summarization

What is the essential meaning?

Keyphrase extraction

Identifies the most important words or phrases in a passage.

Input · “The Contoso TrailMaster arrived late, and its battery will not charge.”

Possible output

- Contoso TrailMaster
- Late delivery
- Battery charging

Use cases

- Tag documents
- Index support cases
- Discover recurring topics
- Improve search

Exam signal

Identify the main subjects or important phrases.

Named-entity recognition

Finds named items and assigns them types.

Input · “Maria Chen contacted Contoso from Seattle on September 12.”

Possible output

Text	Entity type
Maria Chen	Person
Contoso	Organization
Seattle	Location
September 12	Date

Exam signal

Identify people, organizations, locations, dates, products, or quantities.

Sentiment analysis

Estimates whether language expresses a positive, neutral, mixed, or negative opinion.

Example · “The agent was helpful, but the replacement arrived broken.”

Possible result

- Agent experience: positive
- Replacement product: negative
- Overall document: mixed

Use cases

- Prioritize dissatisfied customers
- Analyze reviews
- Track customer experience
- Detect opinion by sentence or target

Exam signal

Determine how customers feel.

Summarization

Condenses text while preserving its essential information.

Input · “A 20-message support conversation”

Output

“Customer cannot charge the TrailMaster after a late delivery. Troubleshooting failed, and a replacement is requested.”

Two useful forms

- Extractive: Selects important existing sentences
- Abstractive: Generates a new condensed explanation

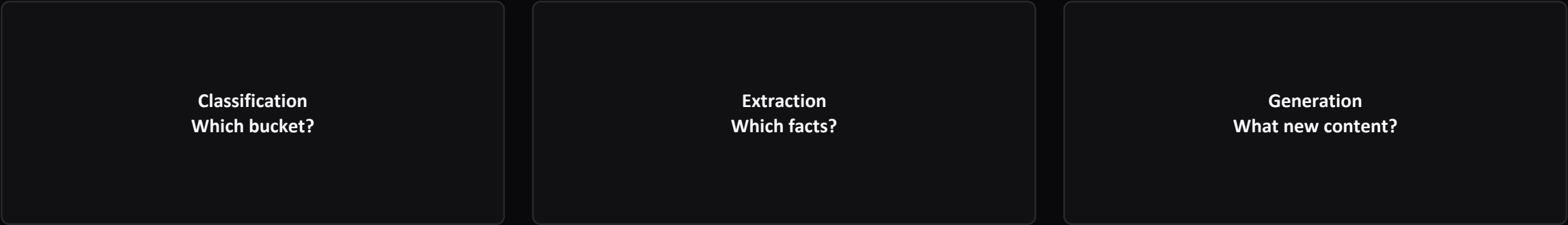
Exam signal

Produce a shorter version containing the main points.

Three different transformations

Transformation	Output	Example
Classification	A label from known categories	Billing complaint
Extraction	Information found in the input	TrailMaster, September 12
Generation	Newly composed content	A personalized reply

Memory model



Named entities or information extraction?

Named-entity recognition

- Identifies general entity types in language
- Person, organization, location, date
- Primarily concerned with linguistic meaning

Information extraction

- Produces structured fields for a defined purpose
- Invoice number, total, vendor, due date
- Can process documents, images, audio, and video

Rule of thumb

Entity type requested → named-entity recognition. Business schema requested → information extraction.

Common “which capability?” patterns

1. Ignore the industry.
2. Find the requested output.
3. Match that output to the capability.

Scenario asks the system to...	Best answer
Find recurring topics in complaints	Key-phrase extraction
Detect company and product names	Named-entity recognition
Identify dissatisfied customers	Sentiment analysis
Condense a long case history	Summarization
Route cases as billing, technical, or returns	Classification
Capture invoice number and total	Information extraction
Draft a personalized response	Generative AI

Exam strategy: ignore the industry, find the requested output, and match that output to the capability.

One message, four possible questions

“I bought a TrailMaster in Seattle. It arrived three days late, and I’m extremely disappointed.”

Desired result	Capability
TrailMaster, Seattle	Named-entity recognition
late delivery	Key-phrase extraction
negative	Sentiment analysis
Delivery complaint	Classification

Key message

The input does not determine the capability—the required output does.

A company wants to route incoming messages into these queues: Billing, Technical support, Returns, and General inquiry.

Which capability is required?

A. Key-phrase extraction

B. Named-entity recognition

C. Classification

D. Generative AI

Answer reveal

C. Classification

The system must assign each message to one of several predefined categories. It does not need to extract a phrase or compose new content.