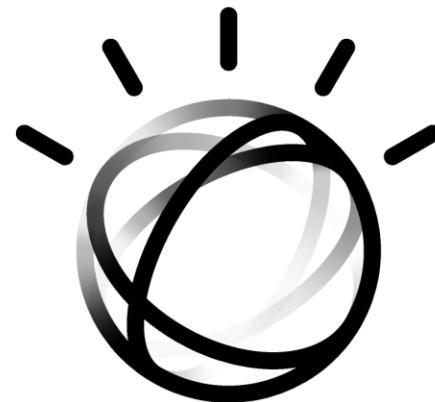


Watsonx AI

cloud.ibm.com

STAT 5350/4350

11/5/2025



IBM Watson®

Recap

- Explain system prompt, user prompt, assistant prompt
- Explain zero, one & few shot prompts
- Define RAG, when is helpful to use it?

Recap

< Prompts

... ⚙ Compare ⚡ Optimize 🌐 Evaluate Save

Your presets ⓘ

Model gpt-4.1-mini ⚙ ⚙
response_format: text temp: 1.00 tokens: 2048 top_p: 1.00
store: false

Functions + Add

System message ⚙
You are a friendly tutor who explains concepts simply and clearly.

Your conversation will appear here

Prompt messages

User
Please summarize the following text in 3 bullet points:
{{input_text}}

+ Add message

Explain quantum computing

⌚ Auto-clear ⬆

Pre-reqs

- Watsonx.ai Studio
- Watsonx-ai Runtime

Cloud.ibm.com

Catalog /

watsonx.ai Studio

(Formerly known as Watson Studio) Develop powerful AI solutions with an integrated collaborative studio and industry-standard APIs and SDKs.



Create

About

Type
Service

i Active Promotion

You've already applied a promo code that gives you \$200 toward this service. [Track your promo](#)

x

Provider
IBM

Last updated
05/06/2025

Category
AI / Machine
Learning

Compliance
HIPAA Enabled
IAM-enabled

Location
Sydney (au-syd)
Frankfurt (eu-de)
London (eu-gb)
Tokyo (jp-tok)
Dallas (us-south)
Toronto (ca-tor)

Select a location

Dallas (us-south)

▼

Select a pricing plan

Prices shown are for country or location:

Plan	Features and capabilities	Pricing
Lite	<p>1 authorized user</p> <p>10 capacity unit-hours monthly limit</p> <p>Environment = # of capacity units required per hour</p> <ul style="list-style-type: none">• 1 vCPU + 4 GB RAM = 0.5• 2 vCPU + 8 GB RAM = 1• 4 vCPU + 16 GB RAM = 2• Decision Optimization + Watson NLP = Environment + 5• Synthetic Data Generator, 2 vCPU + 8 GB RAM = 7 (requires watsonx.ai Runtime)	Free

Cloud.ibm.com

Catalog /

watsonx.ai Runtime

Formerly known as Watson Machine Learning. Quickly build, run and manage generative AI and machine learning applications with built-in performance and scalability.



Create

About

Type
Service

Active Promotion

You've already applied a promo code that gives you \$200 toward this service. [Track your promo](#)

X

Provider
IBM

Select a location

Last updated
11/05/2025

Dallas (us-south)

▼

Category
AI / Machine
Learning

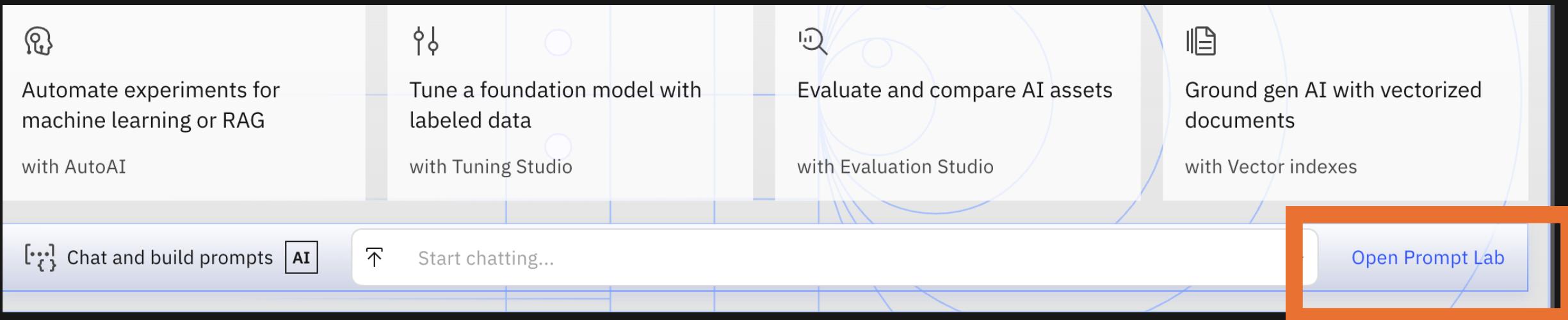
Select a pricing plan

Compliance
HIPAA Enabled
IAM-enabled
Service
Endpoint
Supported

Prices shown are for country or location:

Plan	Features and capabilities	Pricing
Lite	<p>Service instance</p> <p>Instance includes:</p> <ul style="list-style-type: none">• 20 capacity unit-hours (CUH) per month• 50,000 tokens/data points per month• 100 pages per month <p>-----</p> <p>Foundation models:</p> <ul style="list-style-type: none">• Inferencing for text generation consumes tokens (as Resource Units)	Free

UI Tour



Get started with a task
Select a task based on your goal.

UI Tour

Discover resources

- Find samples & other resources.
- Try a sample project to take a comprehensive tutorial.

Resource hub

 Explore foundation models from IBM and other third-parties.
[Explore foundation models →](#)

[...] Prompts →
Data →
Projects →
Notebooks →
Agents →
[Explore samples →](#)

Developer access i

Project or deployment space
Project or deployment space ▾

Project ID
00000000-0000-0000-0000-000000000000

watsonx.ai URL
<https://us-south.ml.cloud.ibm.com>

Get started and make your first API request to inference a foundation model

[Create API key](#) +
[Manage IBM Cloud API keys →](#)

What's new

Migrate assets to inventories in watsonx.governance
Oct 27, 2025 →

Parameter-efficient fine tuning methods are now available in the Toronto and Sydney regions
Oct 23, 2025 →

Work with new deploy on demand models in watsonx.ai
Oct 16, 2025 →

Work with the new text classification API in watsonx.ai on IBM Cloud
Oct 15, 2025 →

UI Tour

Terms & Conditions

- Understand & agree to T&Cs.

Welcome to Prompt Lab

By using any foundation model provided with this Cloud Service, you acknowledge and understand that:

- Some models included in the Cloud Service are Non-IBM Products. Review the applicable model details on the third party provider and license terms that apply.
- Models may generate outputs that contain misinformation, obscene or offensive language, or discriminatory content, Client should review the outputs for such information or content prior to re-use. Users should review and validate the outputs generated.
- The output generated by all models is provided to augment, not replace, human decision-making by the Client.

UI Tour

Main Capabilities

- Chat Type.
- Models Available
- Sample prompts

Projects / Getting started with watsonx.governance / Prompt Lab

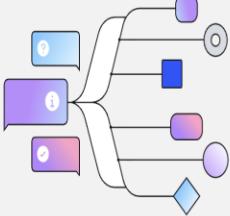
Chat Structured | Freeform

AI Model: llama-3-3-70b-instruct

watsonx 06:04 AM

Customize your chat

Before you start chatting, you can update the current settings and ground the chat with documents or media files. To upload documents or other files, click  next to the input field.



Sample questions

What are more efficient alternatives to a 'for loop' in Python? →

What is the Transformers architecture? →

Create a chart of the top NLP use-cases for foundation models. →

Describe generative AI using emojis. →

Type something... 

AI guardrails off 

Unsaved  New prompt + Deploy 

Lab - 1

Structured prompt

- System prompt.
- Zero, one, few shot examples
- Try different models

Projects / Getting started with watsonx.governance / Prompt Lab

Chat Structured Freeform

AI Model: granite-3-8b-instruct

AI guardrails on

Untitled

Hint: This model works better when you provide at least 1 example.

Set up ^

Instruction (optional) (i)

Tell the model what to do. For example: Summarize the transcript.

Examples (optional) (i)

Input:
Enter your example input here.

Output:
Enter your desired output.

Add example +

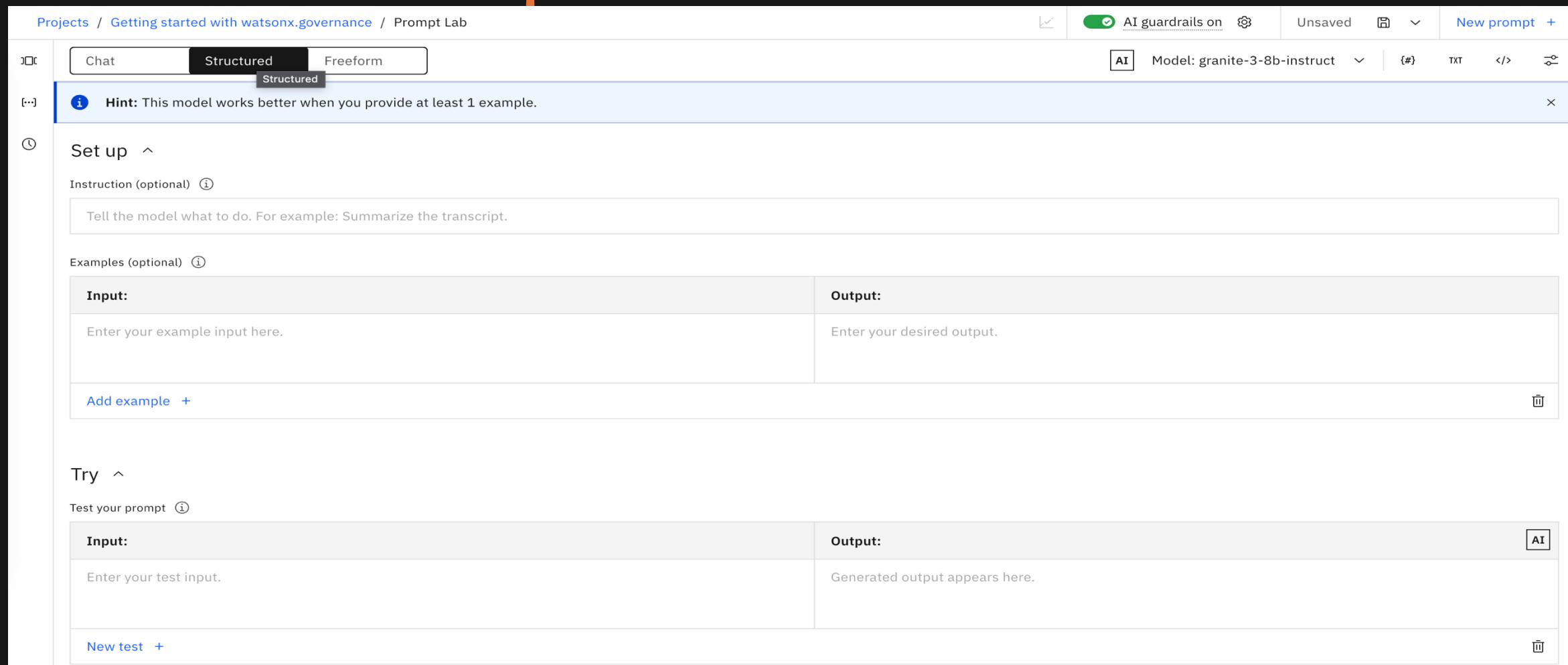
Try ^

Test your prompt (i)

Input:
Enter your test input.

Output:
Generated output appears here.

New test +



Lab - 2

Freeform prompt

- System prompt.
- Zero, one, few shot examples
- Try different models

The screenshot shows the WatsonX Governance Prompt Lab interface. At the top, there's a navigation bar with 'Projects / Getting started with watsonx.governance / Prompt Lab'. Below it, a toolbar has tabs for 'Chat', 'Structured', and 'Freeform', with 'Freeform' selected. To the right of the toolbar are buttons for 'AI guardrails off' (disabled), 'Model: granite-3-8b-instruct', and file options like 'Untitled', 'New prompt +'. A hint message says 'Hint: This model works better when you provide at least 1 example.' Below this, a section titled 'Below is an example of how I want you to answer questions.' shows an 'Example Interaction': 'User Question: What is a neural network?' followed by 'Assistant Answer: A neural network is a type of computer program that learns patterns from data. Think of it like a brain made of layers of "nodes" that help recognize patterns, such as the difference between pictures of cats and dogs.' There's a separator line with four dashes ('----'). Below it, a user is prompted to 'Now please answer the next question in the **same style**:' with the question 'User Question: What is quantum superposition?'. At the bottom, status information includes 'Stop reason: Max tokens parameter reached', 'Tokens: 92 input + 200 generated = 292 out of 131072', and 'Time: 2.4 seconds'. On the right, there are 'Clear output' and 'Generate' buttons.

Lab - 3

Save as:
Jupyter Notebook

[...] Prompt Lab | Part of IBM watsonx.ai®

Prompt notebook

Prompt Notebook with Chat - Prompt Lab Notebook v1.1.0

This notebook contains steps and code to demonstrate inferencing of prompts generated in Prompt Lab in watsonx.ai with a chat format. It introduces Python API commands for authentication using API key and prompt inferencing using WML API.

Note: Notebook code generated using Prompt Lab will execute successfully. If code is modified or reordered, there is no guarantee it will successfully execute. For details, see: [Saving your work in Prompt Lab as a notebook](#).

Some familiarity with Python is helpful. This notebook uses Python 3.10.

Notebook goals

The learning goals of this notebook are:

- Defining a Python function for obtaining credentials from the IBM Cloud personal API key
- Defining parameters of the Model object
- Using the Model object to generate response using the defined model id, parameters and the prompt input

Lab - 4

- **Prompt Examples**
- **One for each category**

