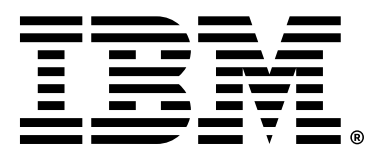


IBM TechXChange Pre-Conference watsonx Hackathon

Kickoff



Welcome to the
IBM TechXChange
Pre-Conference
watsonx Hackathon

September 12 - 22

This is your chance to:

- Advance your generative AI skills
- Take hands-on learning and get no-charge access to watsonx from IBM
- Compete with fellow hackers for a chance to travel to **IBM TechXchange Conference 2024**, where top teams will show off their work!



Agenda

– Opening remarks

Jennifer Judge

Experience Lead, IBM Coding Challenges

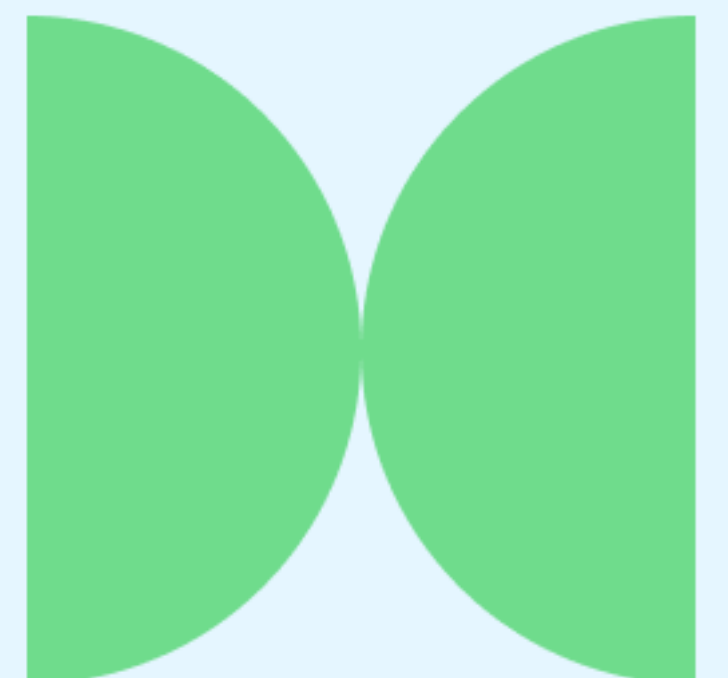
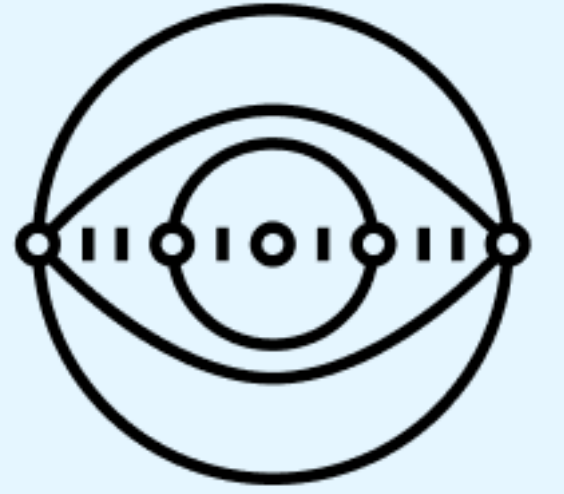
– Keynote address

Brad Topol

IBM Distinguished Engineer and Director of Open Technologies

– Hackathon overview
and next steps

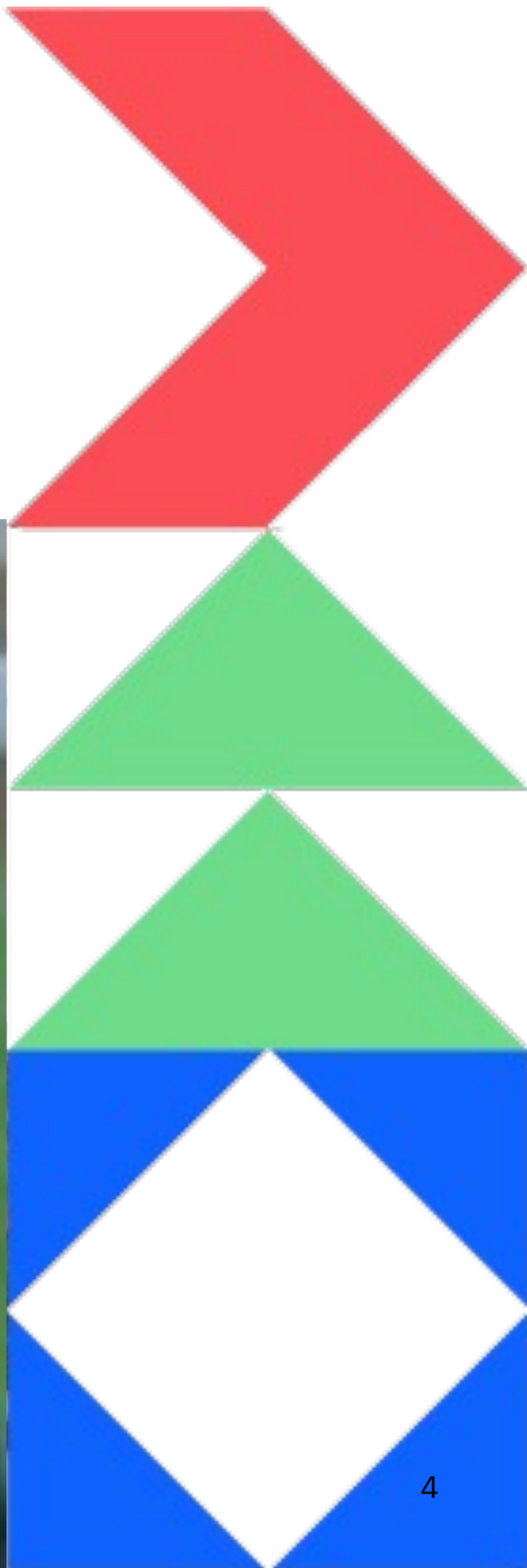
Jennifer Judge



Accelerating Enterprise Productivity with Generative AI

Brad Topol

IBM Distinguished Engineer &
Director of Open Technologies,
IBM Research



Our Point of View

Seizing the AI Opportunity:

The time is now



60%

organizations are not yet developing a consistent, enterprise-wide approach to generative AI¹

87%

of executives expect job roles to be augmented, rather than replaced, by generative AI¹

38%

say their organization has the in-house expertise to adopt gen AI for innovation.¹

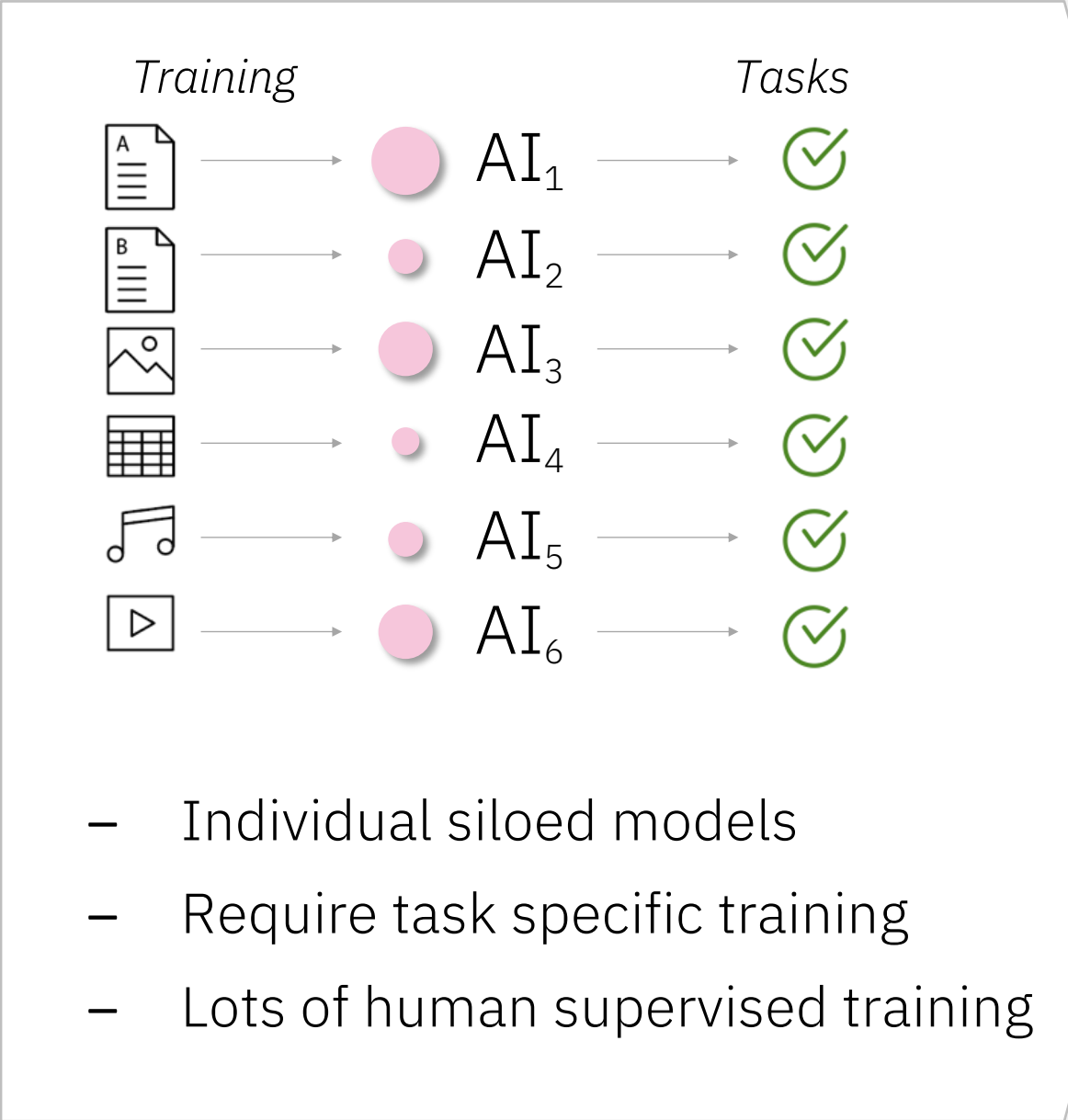
¹IBM Institute for Business Value, The CEO's Guide to Generative AI

Generative AI

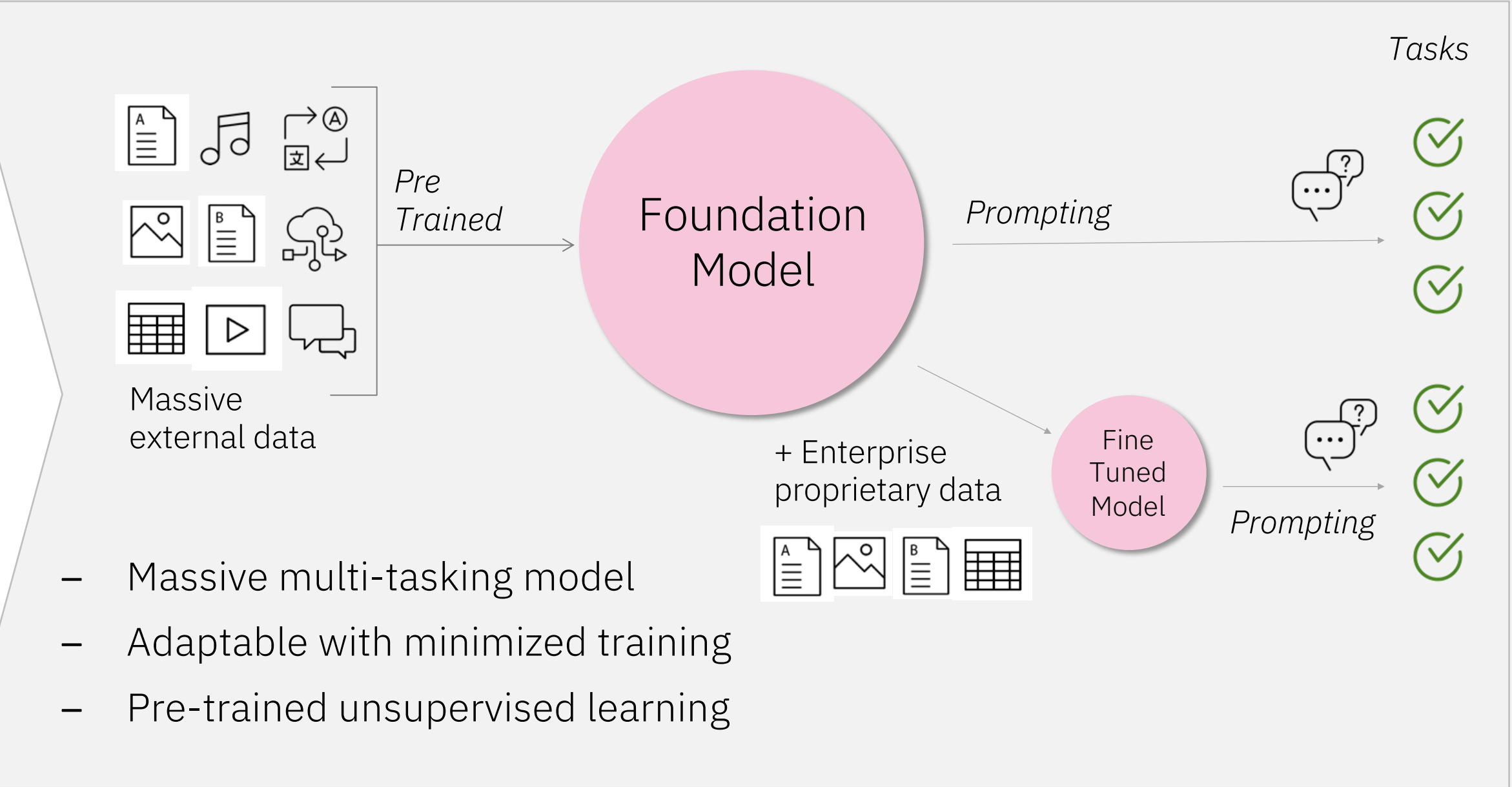
Artificial intelligence (AI) that can create original content—such as text, images, video, audio or software code—in response to a user’s prompt or request

Foundation models establish a new paradigm for AI capabilities

Traditional AI models



Foundational models



Enhanced capabilities

- Summarization
- Conversational knowledge
- Content creation
- Code co-creation

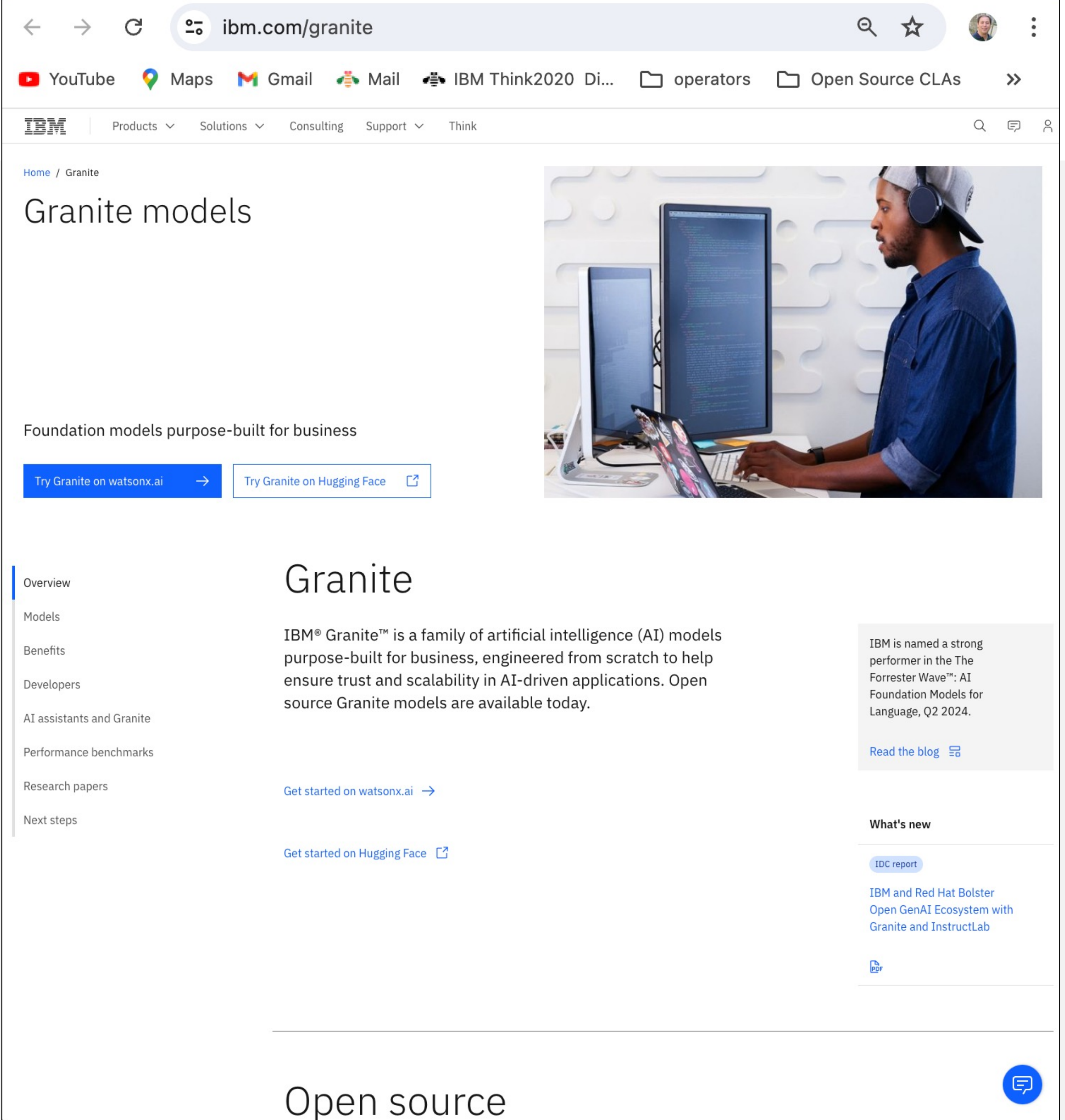
Key advantages

- Up to 70% reduction in certain NLP tasks
- Incremental revenue through better performance
- Lower upfront costs through less labeling
- Faster deployment through fine tuning and inferencing
- Equal or better accuracy for multiple use cases

Background:

What are LLMs?

- Large Language Models (LLMs) are a category of AI models
 - Trained on enormous amounts of unlabeled data
 - Very expensive to create
 - Built on transformer neural network model ML/DL methodologies
- LLMs power a range of useful applications like chatbots and coding assistants.
- LLMs are capable of understanding and generating natural language and other types of content to perform a wide range of tasks.
- Proprietary Models
 - OpenAI's GPT models
 - Anthropic's Claude models
- Partially Open Models
 - Meta's Llama models
 - Has some usage constraints
- Fully Open Models
 - Mistral AI's Mistral models
 - **IBM's Granite Models**



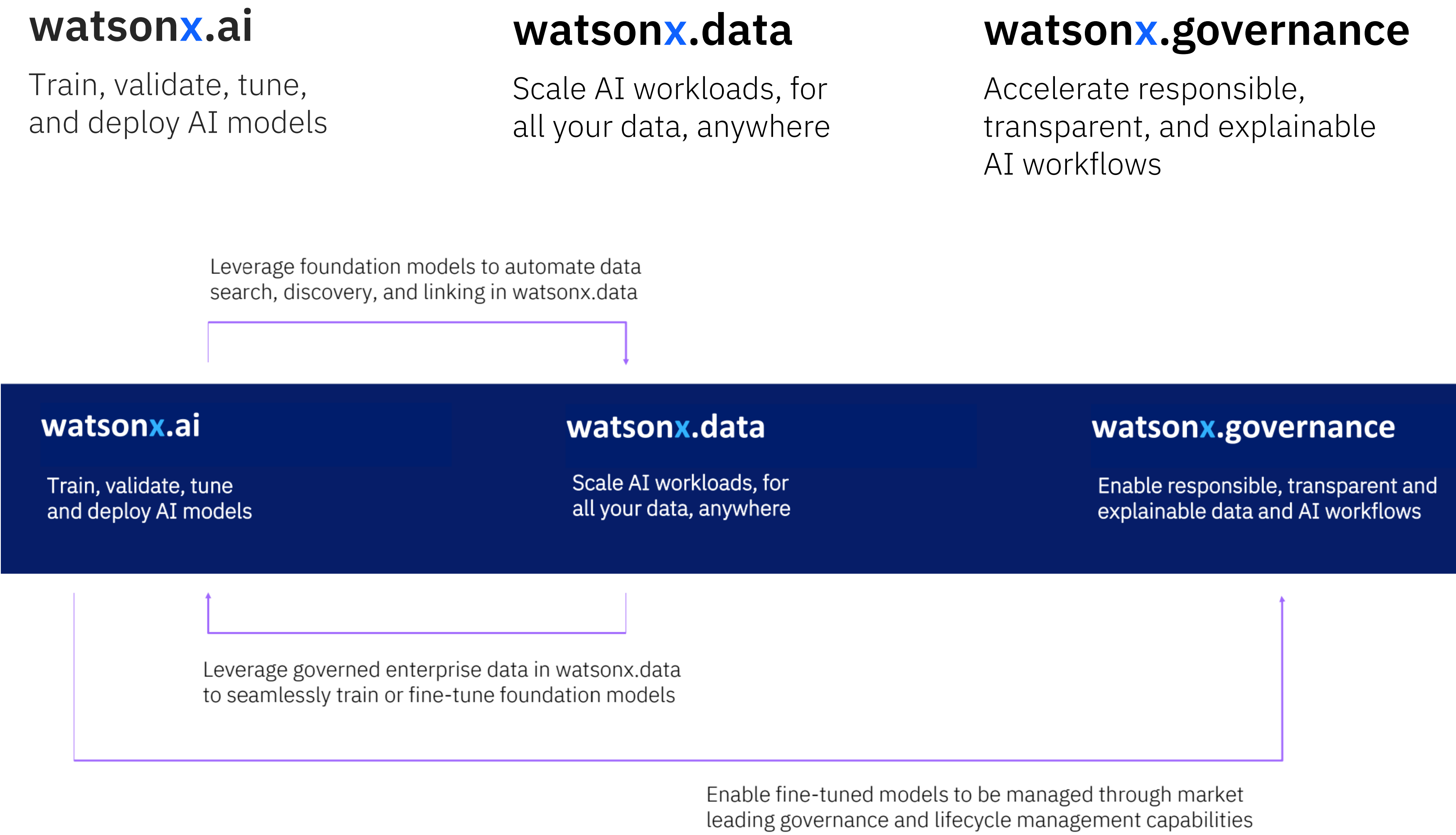
The screenshot shows the IBM Granite models website. The browser address bar displays 'ibm.com/granite'. The page features a navigation bar with links to YouTube, Maps, Gmail, Mail, IBM Think2020 Di..., operators, and Open Source CLAs. The main content area is titled 'Granite models' and includes a sub-header 'Foundation models purpose-built for business'. Below this, there are two buttons: 'Try Granite on watsonx.ai' and 'Try Granite on Hugging Face'. A large image on the right shows a person wearing headphones working at a computer. The page also includes a sidebar with links to Overview, Models, Benefits, Developers, AI assistants and Granite, Performance benchmarks, Research papers, and Next steps. The main text describes IBM Granite as a family of artificial intelligence (AI) models purpose-built for business, engineered from scratch to help ensure trust and scalability in AI-driven applications. Open source Granite models are available today. There are links to 'Get started on watsonx.ai' and 'Get started on Hugging Face'. A sidebar on the right mentions that IBM is named a strong performer in the The Forrester Wave™: AI Foundation Models for Language, Q2 2024, and includes a link to 'Read the blog'. At the bottom, there is a section titled 'Open source' and a chat icon.

Check out Granite - IBM's open source-based family of LLMs at <https://www.ibm.com/granite>

What IBM offers

The platform for AI and data **watsonx**

- AI platform and development management tools for full lifecycle
 - Prepare data, train, validate, tune, and deploy
- Pre-trained foundation models that meet the needs of different tasks in enterprise
- Flexible model training and application development strategy for the enterprise
- Fast and convenient large-scale deployment and management
- Governance



Three proven,
high impact use
cases as starting
points with IBM

Client results

HR

40%

improvement in
process productivity¹

- Talent acquisition
- Performance management
- Employee data management
- Employee communications
- Learning and event management

Customer service

>97%

customer inquiries
handled by AI assistant²

- Customer self-service
- Case deflection
- Agent intent efficacy
- Agent assist
- Mobile FAQ with answers

App modernization

60%

software development
content automatically
generated by AI³

- Automated code generation
- Application discovery and analysis
- Code refactoring
- Code conversion
- Code attribution

Promise of
generative AI

Content generation and
classification

*Train and tune relevant
foundation models using
company-specific HR data
spanning hybrid environments*

Retrieval-augmented
generation, summarization,
and classification

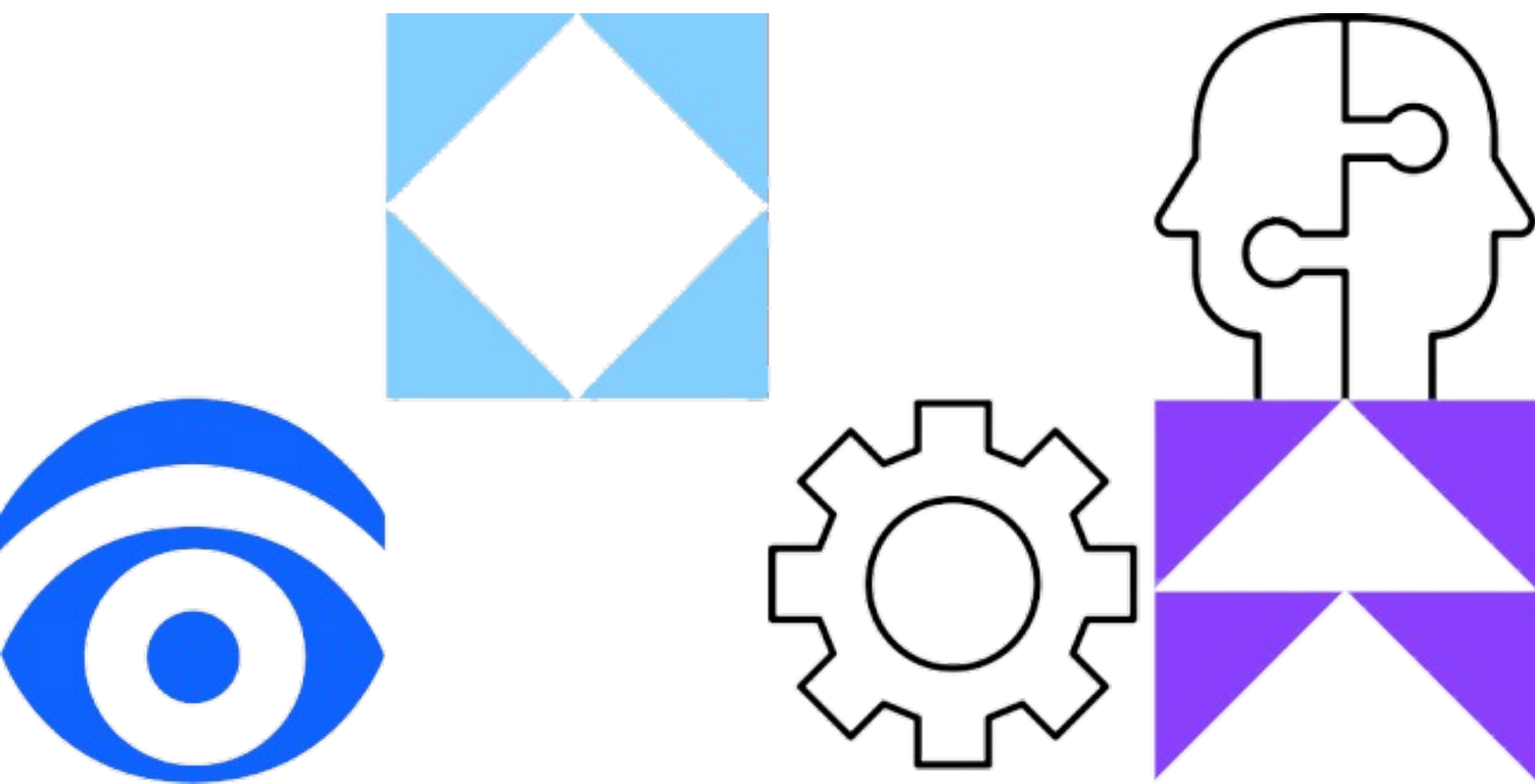
*Train and tune relevant
foundation models using
customer specific datasets to
improve customer satisfaction*

Summarization,
content generation

*Automate code generation and
reduce cycle time for modernizing
applications, based on requirements
and business rules*

The hackathon challenge

How can generative
AI technology
improve productivity
of an important
everyday activity?



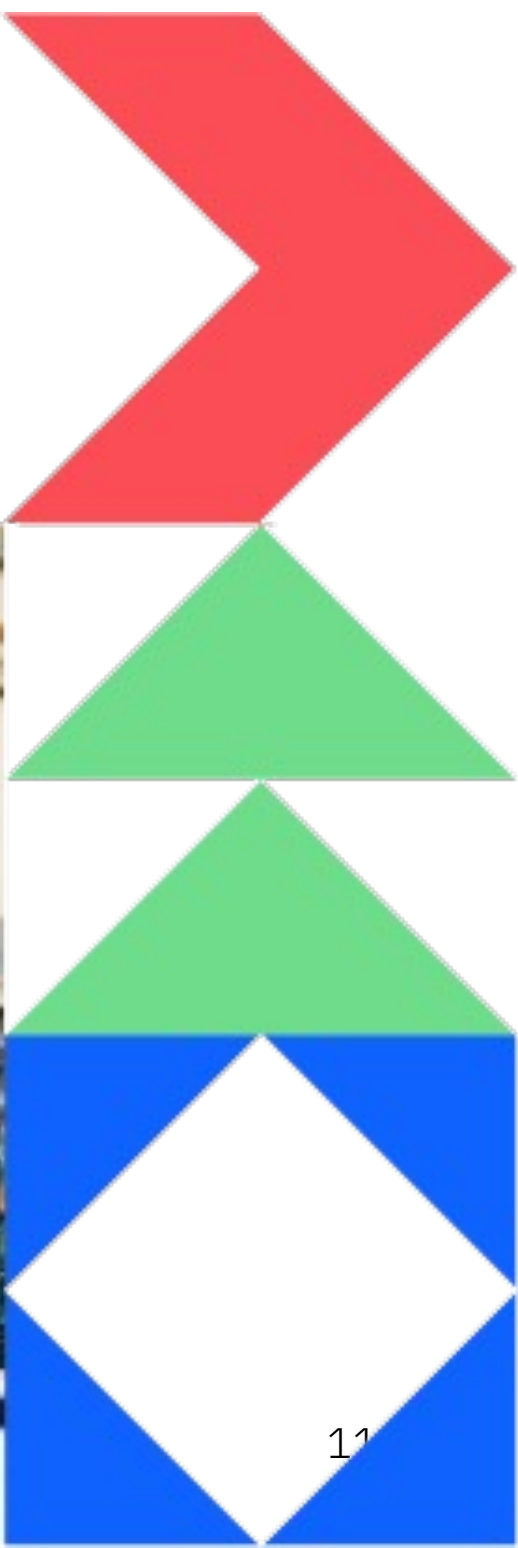
watsonx.ai

watsonx
Orchestrate

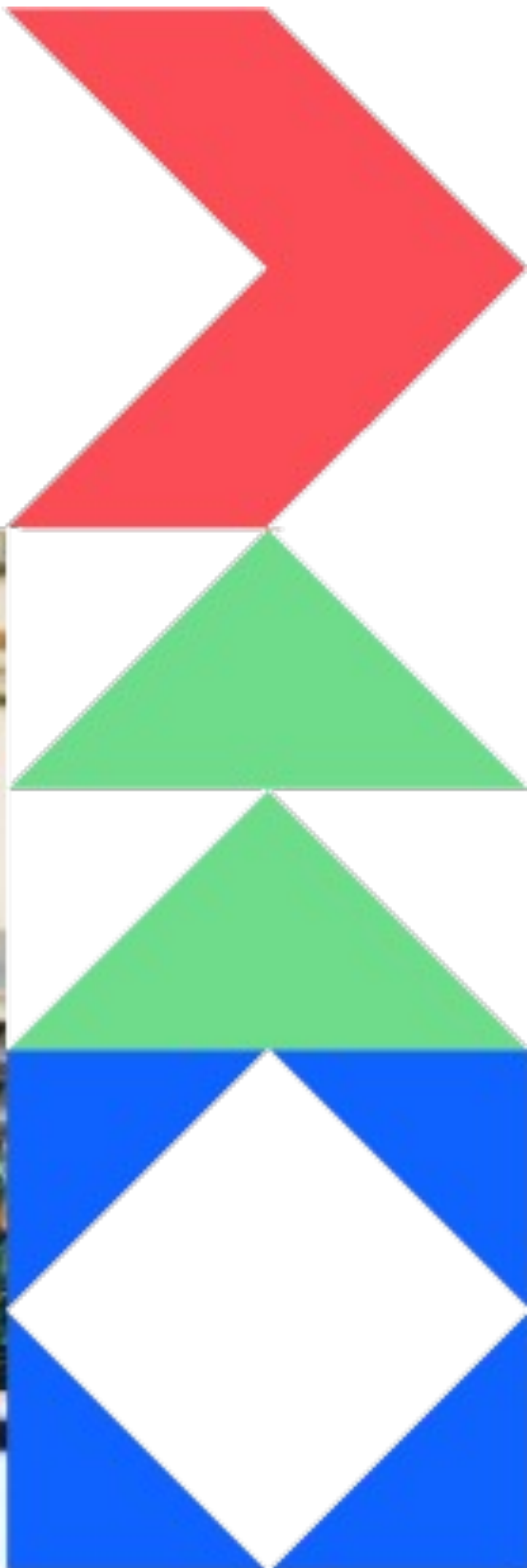
Ready, set, hack!

Your next steps

- Check your email!
- Work individually or join a team
- Complete the hackathon path guide
(Hint: Follow all setup instructions)
- Review the required deliverables you need to create
- Submit project deliverables by 3:00 PM ET on September 22



Demonstration:
The hackathon web site



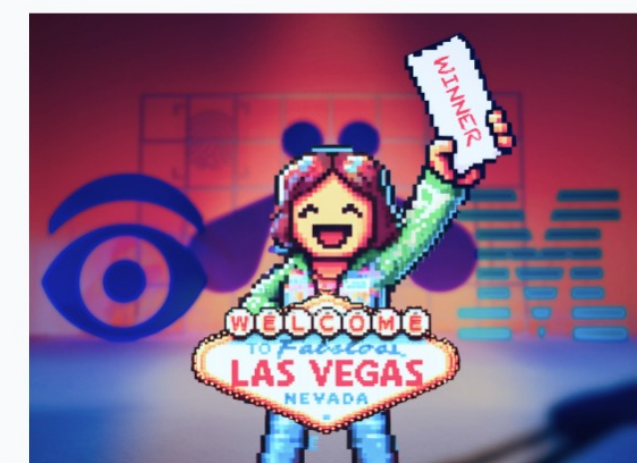
Prizes

- **September 30:** Top teams announced, watch your email *
- **Top 3 teams** will win IBM TechXchange Conference 2024 passes, including travel and lodging *
- At the conference, we'll reveal the grand prizes:
 - **1st place:** \$5,000 in IBM Cloud credits, IBM Individual Learning Subscription, and IBM watsonx swag bag
 - **2nd place:** IBM Individual Learning Subscription and IBM watsonx swag bag
 - **3rd place:** IBM watsonx swag bag
- Prizes for top teams that don't make the finals:
 - **1st runners-up:** Apple AirPods Pros®
 - **2nd runners-up:** IBM watsonx hoodies
- **The 100 top scoring qualified teams** will receive 1 complimentary ticket per team member to the IBM TechXchange Conference 2024 (Travel and lodging not included).

** To be a qualified finalist, at least one member of the team must be able to attend the IBM TechXchange Conference 2024 in-person.*

We ask that you watch your email:

- *Short time to book travel*
- *Finalists need to be ready to travel, including any travel visa requirements*



IBM TechXchange Pre-Conference watsonx Hackathon

IBM TechXchange Pre-Conference watsonx Hackathon

[Get started](#) | [The challenge](#) | [Judging criteria](#) | [Prizes](#) | [Key dates](#)

Get started

Welcome and thank you for joining the hackathon!

1. Find the "path guide" for the path your team is on in the hackathon on th

Your access to watsonx

watsonx.ai teams:

- You will receive an email with a link to “Join now” to get at your IBM Cloud account
- Already have an IBM account? Use/switch to the account provisioned for the hackathon. Do not use your own IBM Cloud account.
- Each person on the team will have their own account. There are tips in the path guide on how to best collaborate.
- For this hackathon IBM is providing you an additional \$100 credit to use towards IBM Cloud services.

watsonx Orchestrate teams:

- Your team lead will be able to log in to their watsonx Orchestrate account directly online and add other team members.

All teams:

- Your **path guide** has a section called “**Before you begin.**” Read this carefully and follow all steps to set up your accounts.

IBM Cloud

Hi [gaurav.demo1\[REDACTED\]@gmail.com](#).

WatsonX Challenge invited you to join the following IBM Cloud account: WatsonX Challenge (Account ID: 1041[REDACTED]6ca2ca2).

[Join now.](#)

The link to join the account expires in 30 days.

When you click to join IBM Cloud, you accept the [Terms of Use](#).

Welcome to IBM Cloud!

Visit the [IBM Cloud console](#).

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IBM

IBM Cloud account email

watsonx.ai path guide

Before you begin

Before you begin

IBM Cloud account set up

Follow the [instructions to set up your IBM Cloud account](#) for the hackathon. Each participant has been provisioned with an individual IBM Cloud account for the hackathon. You will not be able to add your teammate to your account. You will have to collaborate offline/virtually to build your solution together on either of your assigned IBM Cloud accounts.

Note on IBM Cloud service usage

For this hackathon IBM is providing you an additional \$100 credit to use towards IBM Cloud services, above the free limit that comes with the IBM Cloud account that is being provisioned for you. This should be more than enough for you to design and create a very compelling submission for this hackathon. You will receive periodic emails that alert you to how much of your total services credits you have consumed. Email notifications will be sent at 25%, 50%, 80% usage, and your account will be deactivated within an hour once you have used 100%. Please plan to use the services efficiently and back up your work accordingly. Refer [tips to work efficiently on watsonx.ai platform](#) and [saving your work](#).

Note on available services

The IBM Cloud and the watsonx.ai platform are pre-configured with all the required services to complete the hackathon. If you notice a permission/access issue for any service or the cloud catalog, then they are not required/available for this hackathon.

Participants will not be able to bring their own model or fine tune models. These features are out of scope for this hackathon.

Before you begin

Form set up by the team lead (If you are the only team member, you must complete the set up as well). The team will have the skills that will be used by each team member. Follow the [watsonx Orchestrate platform instructions](#) to complete the set up for all team members who will use later while building the solution. (One-time set up per account).

watsonx Orchestrate platform set up by the team lead (If you are the only member, you must complete this step). Team leads can follow the [onboarding instructions](#) to onboard their team members to the watsonx Orchestrate platform.

Onboard team members to the watsonx Orchestrate platform (If you are the only member, you must complete this step). Team leads can follow the [onboarding instructions](#) to onboard their team members to the watsonx Orchestrate platform.

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Watsonx Orchestrate path guide

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Where can I get help?



1. Read the path guide



2. Read the FAQs



3. See if others on Slack have asked the same question:

- watsonx.ai path: [#txc-pre-conf-watsonx-hack_ai](#)
- watsonx Orchestrate path: [#txc-pre-conf-watsonx-hack_wxo](#)

4. Ask your question in Slack and tag @AskChallenge



5. If AskChallenge can't answer, expert mentors will jump in to help!

Check your email and get started!

