



# IBM WATSONX

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# TABLE OF CONTENTS

01 Introduction to Watsonx

02 Development of Watsonx

03 Components of Watsonx

04 Use of AI

05 Applications of Watsonx

06 Future Scope for Advancements



## ABOUT WATSONX

- Watsonx was revealed on May 9, 2023, at the annual Think conference of IBM.
- A cloud-based, open-source platform for creating AI-powered apps.
- supports multiple large language models (LLMs).
- Offers a range of resources and services for training models, preparing data, and deploying them.
- Gives developers of all experience levels the ability to use AI technologies.

# DEVELOPMENT OF WATSONX



- **Generative AI:**

- Integrated generative capabilities into more tools.
- Developing new use cases.
- Addressing ethical considerations.

- **Foundation models:**

- Expanded access and variety
- Enhanced customization
- Improved performance and efficiency

- **Data management:**

- Simplify data ingestion and preparation
- Strengthen data security and privacy
- Expand data lakehouse capabilities

- **Sustainability:**

- Develop energy-efficient AI models
- Promote responsible AI practices

# COMPONENTS OF WATSONX

## Watsonx.ai

- Studio
- Automated Pipelines
- Advanced Features

## Watsonx.data

- Data Lakehouse
- Generative AI integration
- Vector Database
- Hybrid Cloud Deployment

## Watsonx.governance

- Enables responsible and ethical use of AI through built-in governance tools.
- Coming soon..



## Additional Components

- **AI Assistants:** Pre-built AI solutions for specific tasks like customer service or fraud detection.
- **Open and Trusted:** Leverages open technologies and focuses on data transparency and control.
- **Targeted for Business:** Designed for enterprise use cases and unlocks new business value.



# USE OF AI

- **Data & Knowledge Management:**

- Information extraction
- Document categorization and tagging
- Knowledge graph creation
- Predictive insights

- **Content Creation & Automation:**

- Automated writing
- Code generation and assistance
- Automated workflows
- Chatbots and virtual assistants

- **Machine Learning & Modeling:**

- Build and deploy AI models
- MLOps integration
- Explainable and fair AI
- Customizable for diverse use cases



- **Open and trusted platform**
- **Scalability and security**
- **Foundation models**

# APPLICATIONS OF WATSONX

**Below listed few are applications of Watsonx in different domains:**

## Healthcare

- **Mayo Clinic:** Identify potential diseases and suggest treatment options.
- **Cleveland Clinic:** Cancer treatment plans by analyzing genetic data.
- **Mount Sinai Health System:** schedule appointments and answer questions about their health.

## Finance

- **JPMorgan Chase:** Detect fraud and prevent money laundering.
- **Goldman Sachs:** Investment insights and recommendations.
- **HSBC:** Automation in loan processing and customer service.



## Manufacturing

- **Boeing:** Sensor data from airplanes to predict maintenance needs and prevent downtime.
- **GE Aviation:** Optimize engine performance and fuel efficiency.
- **Honeywell:** Automation in quality control and defect detection.

**1. NASA:** Analyze data from space missions and make scientific discoveries.

**2. Abu Dhabi National Oil Company:** Uses visual recognition technique to label 2D

# ADVANCEMENTS IN FUTURE



- 01 AI Foundation Models:**
  - Deeper integration
  - Focus on interpretability and explainability
  - Enhanced customization
- 02 Generative AI:**
  - More use cases
  - Responsible Development
  - Improved controllability

- 03 Data Management:**
  - Seamless integration
  - Advanced data preparation
  - Enhanced security & Privacy
- 04 Accesibility:**
  - Simplified UI
  - Pre-built AI Solutions





