
CAPSTONE PROJECT

PROJECT TITLE

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OUTLINE

- **Problem Statement** (Should not include solution)
- **Proposed System/Solution**
- **System Development Approach** (Technology Used)
- **Algorithm & Deployment**
- **Result (Output Image)**
- **Conclusion**
- **Future Scope**
- **References**

PROBLEM STATEMENT

Example: Chronic diseases like diabetes, hypertension, and heart conditions require continuous monitoring and timely intervention. Patients often miss early warning signs, and healthcare providers lack real-time data, leading to avoidable complications, frequent hospital visits, and poor adherence to treatment plans.

PROPOSED SOLUTION

- An AI-powered agent for chronic disease monitoring that:
- Continuously analyzes health data from wearables, medical records, and patient inputs.
- Detects early warning signs using AI and predictive analytics.
- Provides medication reminders, personalized insights, and lifestyle recommendations.
- Offers real-time monitoring and alerts for diseases like diabetes, hypertension, and heart disease.
- Bridges the gap between patients and healthcare providers to enable proactive care.

SYSTEM APPROACH

- Technology Used: IBM Cloud Lite services and IBM Granity.
- Integration with real-time data sources (wearables, EHRs).
- Use of AI models for predictive analytics and recommendations.
- User interfaces for patients and providers.
- Secure data storage and processing in the cloud.

ALGORITHM & DEPLOYMENT

- AI algorithms to analyze trends and detect anomalies in health data.
- Predictive models to forecast potential risks.
- IBM watsonx AI agent created and deployed using IBM Cloud Lite.
- Integration with APIs and real-time data using IBM Granity.
- Deployment as a web chatbot/API that can be embedded in health apps or provider dashboards.

RESULT

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Deployment spaces / ChronicDiseaseMonitoringSpace / watsonx Agent /

watsonx Agent ✓ Deployed Online

API reference

Test

Preview

Endpoints for inferencing

Private endpoint

https://eu-gb.ml.cloud.ibm.com/ml/v4/deployments/bb06c859-003a-46a4-a535-f54ef9dff86c/ai_service?version=2021-05-01

https://eu-gb.ml.cloud.ibm.com/ml/v4/deployments/bb06c859-003a-46a4-a535-f54ef9dff86c/ai_service_streaming?version=2021-05-01

Public endpoint

https://eu-gb.ml.cloud.ibm.com/ml/v4/deployments/bb06c859-003a-46a4-a535-f54ef9dff86c/ai_service?version=2021-05-01

https://eu-gb.ml.cloud.ibm.com/ml/v4/deployments/bb06c859-003a-46a4-a535-f54ef9dff86c/ai_service_streaming?version=2021-05-01

[Learn more](#) about the 2021-05-01 version query parameter

Code snippets

cURL	Java	JavaScript	Python	Scala
<pre># NOTE: you must set \$API_KEY below using information retrieved from your IBM Cloud account (https://eu-gb.dataplatform.cloud.ibm.com/docs/) export API_KEY=<your API key></pre>				

Bearer <token>

IAM

About this deployment

Name

watsonx Agent

Description

Change this description to reflect your particular agent

Deployment Details

Deployment ID: [bb06c859-003a-46...](#)

Serving name:

No serving name.

Software specification:

[runtime-24.1-py3.11](#)

Hardware specification:

Extra extra small: 1 CPU and 2 GB RAM

Copies:

1

Tags

wx-agent

Associated asset

[watsonx Agent](#)

[7e00e45f-5aad-4fa4-983a-d647fff80de4](#)

Last modified
4 minutes ago

RESULT

IBM watsonx

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watsonx Agent ✔ Deployed Online

API reference Test **Preview**

New chat +

G You 09:47 PM

which diseases comes under chronic diseases

🤖 watsonx Agent 09:47 PM

Based on the search results, the following diseases come under chronic diseases:

1. Heart disease

2. Cancer

3. Diabetes

4. Stroke

5. Arthritis

6. Chronic obstructive pulmonary disease (COPD)

7. Chronic pain

8. Congestive heart failure

9. Dementia

10. Alzheimer's disease

Type something...

➤

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1 minute ago

CONCLUSION

The AI agent improves chronic disease management by enabling proactive interventions, reducing hospital visits, and increasing patient adherence to treatment. It personalizes care, supports both patients and healthcare providers, and uses real-time insights to improve health outcomes.

FUTURE SCOPE

- Extend support to additional chronic conditions.
- Deeper integration with hospital systems and national health databases.
- Advanced predictive models incorporating genetic data.
- Multilingual support for wider accessibility.
- Mobile app integration for daily patient engagement.

REFERENCES

- IBM SkillsBuild & watsonx documentation.
- Research articles on AI in chronic disease monitoring.
- Medical guidelines for diabetes, hypertension, and heart disease management.

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Gopi Chandrika Appikonda

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



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Learning hours: 20 mins



THANK YOU