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.
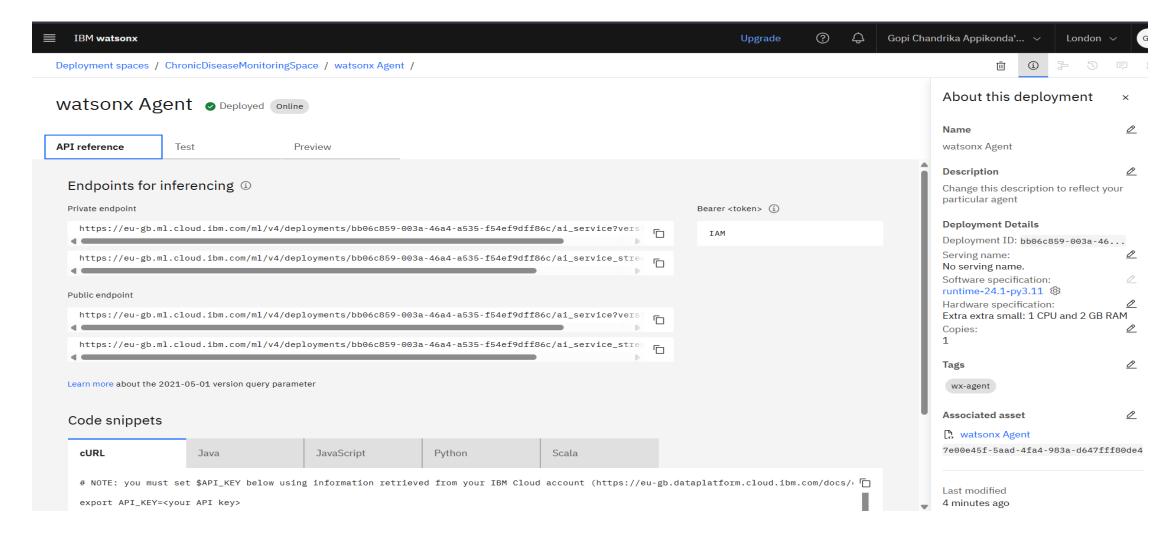- Secure data storage and processing in the cloud.

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.

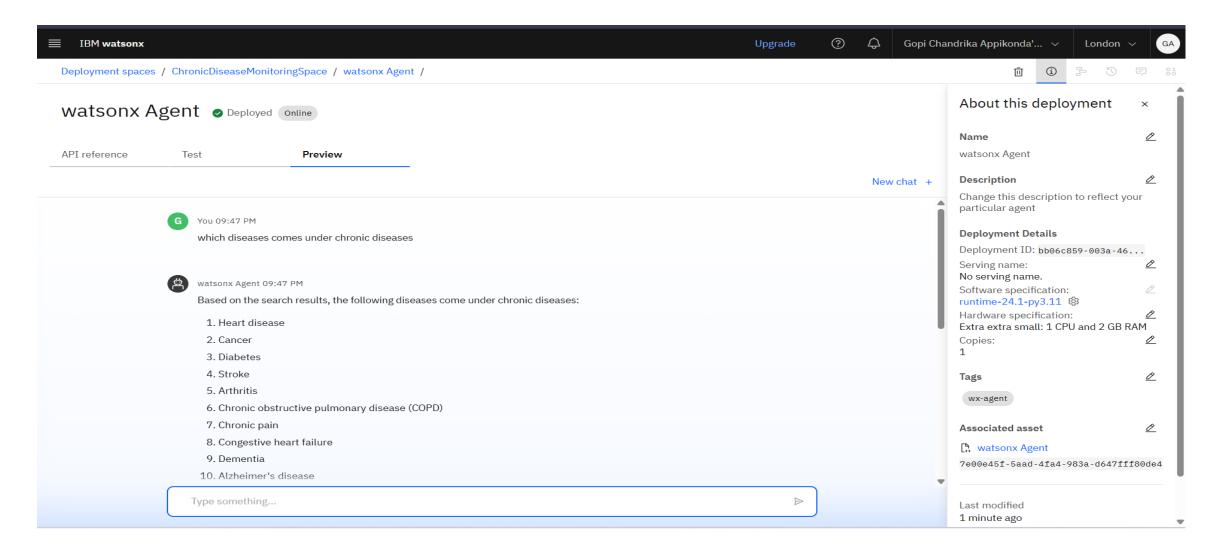- Deployment as a web chatbot/API that can be embedded in health apps or provider dashboards.

RESULT

RESULT

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.

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According to the Adobe Learning Manager system of record

Completion date: 25 Jul 2025 (GMT)   **Learning hours:** 20 mins

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THANK YOU