

**Project Development Phase**  
**Model Performance Test**

Date	28 june 2025
Team ID	LTVIP2025TMID50016
Project Name	HealthAI: intelligent healthcare assistant Using IBM Granite
Maximum Marks	

**Model Performance Testing:**

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
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1.	Model Summary	-	<div><div>1. Accuracy – How closely the AI output matches medically relevant conditions.</div><div>2. Relevance – Whether the AI’s response is appropriate and makes clinical sense for the given symptoms.</div><div>3. Latency – The time (in seconds) it takes the model to respond after receiving a prompt.</div><div>4. Response Time – Same as latency; important for real-time user experience.</div><div>5. Robustness – The model’s ability to handle incomplete input, or unusual symptom phrasing.</div><div>6. Safety – Ensures that the model output does not include dangerous or hallucinated medical advice.</div><div>7. Disclaimer – A warning or notice included in the AI output to inform the user that this is not a diagnosis.</div><div>8. Token Count – Number of tokens in the input and output, important for performance and cost in APIs.</div><div>9. Inference – The act of generating a response from the model after processing input.</div><div>10. Test Case – A predefined input (symptoms) used to evaluate the model’s output.</div></div>
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2.	Accuracy	<p>Training Accuracy -</p> <p>Validation Accuracy -</p>	<pre> import datetime from transformers import AutoTokenizer, AutoModelForCausalLM import torch  # Load IBM Granite model model_id = "ibm-granite/granite-3.3-2b-instruct" tokenizer = AutoTokenizer.from_pretrained(model_id) model = AutoModelForCausalLM.from_pretrained(model_id)  # Function to ask IBM Granite model def ask_granite(prompt):     inputs = tokenizer(prompt, return_tensors="pt")     outputs = model.generate(**inputs, max_new_tokens=200, temperature=0.5)     response = tokenizer.decode(outputs[0], skip_special_tokens=True)     return response.strip()  # Main health assistant function def health_assistant():     print("@@Hello! I'm your Health AI Assistant (powered by IBM Granite).")     name = input("What's your name? ")     print(f"Hi {name}, please describe your symptoms (comma-separated).")      symptoms_input = input("Symptoms: ")     symptoms = [s.strip() for s in symptoms_input.split(",")]     symptom_text = ", ".join(symptoms)      print("\n🔍 Analyzing symptoms with AI...")     prompt = f"The user reports the following symptoms: {symptom_text}. What are the most likely medical conditions or causes?"     granite_response = ask_granite(prompt)      print("\n📋 AI Suggested Conditions:")     print(granite_response)      print("\n⚠️ Note: This is not a medical diagnosis. Please consult a healthcare professional.")     print(f"🕒 Timestamp: {datetime.datetime.now().strftime('%Y-%m-%d %H:%M:%S')}")  # Run the assistant if __name__ == "__main__":     health_assistant() </pre>
3.	Fine Tuning Result( if Done)	Validation Accuracy -	<pre> @@Hello! I'm your Health AI Assistant (powered by IBM Granite). What's your name? Ashok Hi Ashok, please describe your symptoms (comma-separated): Symptoms: Covid -19 The following generation flags are not valid and may be ignored: {"generation_config": {"max_new_tokens": 200, "temperature": 0.5, "top_k": 1, "top_p": 1, "typical_p": 1, "do_sample": true, "seed": -1, "truncate_prompt_tokens": 0, "guided_decoding": {"guided_decoding_backend": "none"}, "guided_output_logits": {"logit_bias": {}}}}  🔍 Analyzing symptoms with AI...  📋 AI Suggested Conditions: The user reports the following symptoms: Covid -19. What are the most likely medical conditions or causes?  Based on the symptoms reported, the most likely medical conditions are:  1. Fever or chills 2. Cough 3. Shortness of breath or difficulty breathing 4. Fatigue 5. Muscle or body aches 6. Headache 7. New loss of taste or smell 8. Sore throat 9. Congestion or runny nose 10. Nausea or vomiting 11. Diarrhea  It is essential to follow the guidelines provided by local health authorities.  ⚠️ Note: This is not a medical diagnosis. Please consult a healthcare professional. 🕒 Timestamp: 2023-06-26 09:33:33 </pre>