

Performance Testing – HealthAI

Performance testing was conducted to evaluate how well **HealthAI** performs under different usage conditions, particularly focusing on **response time**, **accuracy**, and **stability** of the system.

✓ Test Metrics and Observations

Test Area	Criteria	Results
AI Response Time	Time taken to generate response	✓ 1.5–2.8 sec per prompt (average)
Symptom Prediction Load	Number of symptoms handled per input	✓ Up to 10 symptoms handled accurately
Concurrent Sessions	Multiple users interacting simultaneously	✓ No lag under 5 concurrent sessions
Data Visualization	Chart rendering and metric updates	✓ Smooth transitions via Plotly
Session State Handling	User data persistency across interactions	✓ Consistent storage & retrieval
Error Handling	Behavior on invalid inputs or API failure	✓ Graceful fallback messages shown
Model Reliability	Consistency in output for same inputs	✓ Stable and context-aware outputs

☐ Test Scenarios Executed

1. **Chat Flood Test:** Sent 10+ rapid fire queries – system maintained <3s response time.
2. **Prediction Stress Test:** Loaded symptom-heavy input sets – predictions remained consistent.
3. **UI Load Test:** Simulated 100+ entries for health metrics – dashboard remained responsive.

4. **API Timeout Handling:** Simulated no network/API key errors – error prompts shown without crash.