Project Development Phase
Model Performance Test

Date	10 February 2025
Team ID	LTVIP2025TMID34483
Project Name	Sustainable smart city assistant using IBM granite LLM
Maximum Marks	

🏙️ Sustainable Smart City Assistant – Model Performance Testing Template (Powered by IBM Granite LLM)

S.No.	Parameter	Description / Values	Screenshot / Evidence
1.	**Model Summary**	- Task type (e.g., sustainability chatbot, energy usage analyzer) - Domain (e.g., waste management, smart transport) - IBM Granite LLM variant used - Data sources (e.g., city IoT data, open gov data)	📎 Attach architecture screenshot
2.	**Model Accuracy**	- **Training Accuracy**: XX% - **Validation Accuracy**: XX% - **Use-case example**: E.g., Energy-saving recommendation success rate	📎 Accuracy graph screenshot
3.	**Fine-tuning Results** (if applicable)	- **Validation Accuracy (post fine-tuning)**: XX% - Pretrained base model: IBM Granite X.X - Domain-specific prompts used	📎 Before/After fine-tuning chart
4.	**Sustainability Impact Estimate**	- Energy reduction potential - CO_2 offset (if measurable) - Smart utility management score	📎 Impact dashboard screenshot
5.	**Prompt Quality Evaluation**	- Mean Response Quality Score (1–5) - Factual Accuracy: XX% - Responsiveness to city scenarios	📎 Sample interaction screenshots
6.	**Bias & Fairness Analysis**	- Audit on bias in responses - Urban region-specific fairness metrics	📎 Audit report evidence
7.	**Inference Efficiency**	- Latency (ms) per prompt - Concurrent users supported - Edge/cloud deployment tested?	📎 Performance log

S.No.	Parameter	Description / Values	Screenshot / Evidence
8.	**Integration Summary**	- City system integration status (e.g., traffic, utilities) - API endpoints tested - IBM Watson Orchestrate / watsonx.ai integration points	📎 Integration flow diagram
9.	**User Feedback (Pilot Testing)**	- End-user satisfaction score - Feedback trends (positive/negative themes) - Accessibility performance	📎 Feedback survey snapshot
10.	**Next Steps / Improvements**	- Planned model upgrades - Use case expansion (e.g., citizen services, disaster response) - Collaboration with city stakeholders	📎 Roadmap sketch