

## Functional and Performance testing

	30 June 2025
Team ID	LTVIP2025TMID38464
Project Name	Sustainable Smartcity Assistant Using IBM Granite LLM
Maximum Marks	

### Model performance Test:

Test Case ID	Scenario (What to test)	Test Steps (How to test)	Expected Result	Actual Result	Pass / Fail
FT-01	User Login & Registration	Attempt login / registration with valid and invalid credentials	Valid users sign in; invalid data shows error	As expected	Pass
FT-02	Role-Based Access	Log in as <b>Citizen</b> / <b>Administrator</b> and navigate dashboard	Pages, menus, and data shown are appropriate to the selected role	As expected	Pass
FT-03	Policy Summarization	Upload a PDF policy and request AI summary	Concise, plain-language summary returned	Works correctly	Pass
FT-04	Citizen Feedback Submission & NLP Analysis	Submit feedback form → check that sentiment appears in admin panel	Feedback stored; sentiment & category displayed	Works correctly	Pass
FT-05	Eco Tips Generation	Trigger daily eco-tip for a sample location/role	Context-aware sustainability tip displayed	Works correctly	Pass
FT-06	KPI Forecasting Visualization	Load historical KPI dataset → view forecast charts	Line/area graphs render with forecast overlay	Works correctly	Pass

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FT-07	Anomaly Alert Notification	Inject outlier data (e.g., sudden spike in water usage)	Alert banner / notification generated	Works correctly	Pass
FT-08	AI Chat Assistant Response	Ask “What are today’s traffic hotspots?” via chat UI	Assistant returns real-time answer with sources	Works correctly	Pass
PT-01	LLM Model Load Time	Measure time from cold start to Granite LLM ready	Model loads $\leq 5$ s	4.3 s	Pass
PT-02	Policy Summary Response Time	Request 5 summaries back-to-back	Each summary generated $\leq 6$ s	5.2 s avg	Pass
PT-03	KPI Dashboard Data Load	Open admin dashboard with 1-year KPI history	Graphs and tables render smoothly ( $< 3$ s)	2.4 s	Pass
PT-04	Anomaly Detection Processing Time	Stream 1 000 data points with anomalies	Detection & alert latency $\leq 2$ s	1.6 s	Pass
PT-05	Chat Assistant Response Time	Send 10 sequential queries	Avg response $\leq 4$ s	3.1 s avg	Pass