

Crosswalk Between NIST AI Risk Management Framework: Generative AI Profile (AI 600-1) and Singapore / IMDA AI Verify Testing Framework

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The National Institute of Standards and Technology's (NIST) *Artificial Intelligence Risk Management Framework (AI RMF): Generative Artificial Intelligence Profile*¹ aims to assist organizations in managing risks unique to or augmented by generative AI (where "risk" encompasses both benefits and harms). The Profile suggests actions to help organizations govern, map, measure, and manage these risks.

The Singapore Infocomm Media Development Authority's (IMDA) AI Verify testing framework² aims to help companies be more transparent about their AI systems, building trust through standardized tests and strengthening organizational processes. It covers 11 globally recognised principles for the risks of both traditional and generative AI.

The table below presents mappings between NIST's Generative AI Profile and IMDA's AI Verify testing framework. These mappings constitute a crosswalk analysis between the frameworks, supporting organisations in aligning their AI work with U.S. and Singapore recommendations. The mappings are color-coded by AI RMF function.

AI Risk Management Framework: Generative AI Profile	AI Verify Testing Framework
GV-1.1-001	Data Governance 8.3.1
GV-1.2-001	Transparency 1.1.1 Transparency 1.1.6 Data Governance 8.2.1
GV-1.2-002	Robustness 6.7.1 Accountability 9.1.1
GV-1.3-001	Safety 4.2.1 Safety 4.3.1
GV-1.3-002	Safety 4.3.1 Security 5.12.1
GV-1.3-003	Safety 4.4.1
GV-1.3-004	Fairness 7.7.1 Accountability 9.1.1 Accountability 9.10.1
GV-1.3-005	Safety 4.3.2 Fairness 7.8.1
GV-1.3-006	Safety 4.4.1
GV-1.3-007	Safety 4.3.1
GV-1.4-001	Safety 4.8.1 Data Governance 8.3.1
GV-1.4-002	Accountability 9.1.1
GV-1.5-001	Accountability 9.5.3 Accountability 9.5.4
GV-1.5-002	Accountability 9.5.4

¹ National Institute of Standards and Technology (2024) *Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile – NIST AI 600-1* <https://doi.org/10.6028/NIST.AI.600-1>

² AI Verify Foundation. *What is AI Verify*: <https://aiverifyfoundation.sg/what-is-ai-verify/>

GV-1.5-003	Safety 4.10.1
GV-1.6-001	Security 5.5.1
GV-1.6-002	Security 5.5.1
GV-1.6-003	Security 5.5.1 Accountability 9.12.1
GV-1.7-001	Accountability 9.4.1
GV-1.7-002	Security 5.14.1 Accountability 9.4.1
GV-2.1-001	Transparency 1.1.1 Transparency 1.5.1 Security 5.13.1 Accountability 9.5.4
GV-2.1-002	Accountability 9.5.2 Accountability 9.5.4
GV-2.1-003	Security 5.1.1 Accountability 9.5.4
GV-2.1-004	Accountability 9.5.2
GV-2.1-005	Transparency 1.6.1
GV-3.2-001	Accountability 9.1.1
GV-3.2-002	Accountability 9.1.1
GV-3.2-003	Accountability 9.1.1
GV-3.2-004	Accountability 9.1.1
GV-3.2-005	Security 5.2.1
GV-4.1-001	Safety 4.4.1
GV-4.1-002	Safety 4.3.1
GV-4.1-003	Security 5.3.1 Accountability 9.5.2
GV-4.2-001	Accountability 9.1.1
GV-4.2-002	Safety 4.3.1
GV-4.2-003	Safety 4.3.1
GV-4.3-001	Safety 4.9.1 Safety 4.9.2
GV-4.3-002	Accountability 9.5.4
GV-4.3-003	Accountability 9.5.4
GV-5.1-001	Accountability 9.10.1
GV-5.1-002	Accountability 9.2.1
GV-6.1-001	Data Governance 8.5.1 Accountability 9.1.1
GV-6.1-002	Data Governance 8.5.1
GV-6.1-003	Safety 4.9.1 Safety 4.9.2
GV-6.1-004	Accountability 9.7.1
GV-6.1-005	Accountability 9.7.1
GV-6.1-006	Security 5.3.1 Accountability 9.7.1
GV-6.1-007	Accountability 9.12.1
GV-6.1-008	Safety 4.9.1
GV-6.1-009	Accountability 9.7.1
GV-6.1-010	Accountability 9.1.1

GV-6.2-001	Safety 4.5.2 Security 5.3.1
GV-6.2-002	Safety 4.5.2 Security 5.8.1
GV-6.2-003	Safety 4.5.2 Security 5.3.1 Security 5.8.1
GV-6.2-004	Safety 4.5.2 Security 5.3.1
GV-6.2-005	Safety 4.5.2
GV-6.2-006	Safety 4.5.2
GV-6.2-007	Safety 4.5.2 Security 5.3.1
MP-1.1-001	Accountability 9.2.1
MP-1.1-002	Accountability 9.2.1
MP-1.1-003	Safety 4.2.1 Safety 4.3.1
MP-1.1-004	Accountability 9.1.1
MP-1.2-001	Accountability 9.5.2
MP-1.2-002	Accountability 9.10.1
MP-2.1-001	Data Governance 8.2.1
MP-2.1-002	Data Governance 8.2.1
MP-2.2-001	Data Governance 8.2.1
MP-2.2-002	Safety 4.9.1
MP-2.3-001	Safety 4.10.1
MP-2.3-002	Safety 4.10.1 Data Governance 8.1.1
MP-2.3-003	Safety 4.10.1 Safety 4.10.2
MP-2.3-004	Safety 4.10.2
MP-2.3-005	Safety 4.10.1
MP-3.4-001	Transparency 1.1.3
MP-3.4-002	Data Governance 8.4.1
MP-3.4-003	Security 5.1.1 Data Governance 8.4.1
MP-3.4-004	Accountability 9.10.1
MP-3.4-005	Safety 4.4.1
MP-3.4-006	Accountability 9.10.1
MP-4.1-001	Data Governance 8.5.1
MP-4.1-002	Data Governance 8.5.1
MP-4.1-003	Accountability 9.1.1
MP-4.1-004	Data Governance 8.1.1
MP-4.1-005	Safety 4.8.1 Data Governance 8.1.1 Data Governance 8.3.1
MP-4.1-006	Data Governance 8.5.1
MP-4.1-007	Safety 4.3.2 Security 5.3.1
MP-4.1-008	Safety 4.3.2
MP-4.1-009	Data Governance 8.3.2

MP-4.1-010	Data Governance 8.1.1 Data Governance 8.3.1
MP-5.1-001	Safety 4.9.1 Safety 4.9.2
MP-5.1-002	Safety 4.9.1 Safety 4.9.2
MP-5.1-003	Transparency 1.1.1
MP-5.1-004	Accountability 9.10.1
MP-5.1-005	Safety 4.3.1
MP-5.1-006	Safety 4.3.1
MP-5.2-001	Accountability 9.10.1
MP-5.2-002	Accountability 9.10.1
MS-1.1-001	Safety 4.9.1 Safety 4.9.2
MS-1.1-002	Safety 4.9.1 Safety 4.9.2
MS-1.1-003	Safety 4.9.2
MS-1.1-004	Accountability 9.10.1
MS-1.1-005	Safety 4.4.1
MS-1.1-006	Fairness 7.4.1 Fairness 7.7.1
MS-1.1-007	Data Governance 8.1.1
MS-1.1-008	Accountability 9.10.1
MS-1.1-009	Safety 4.7.1
MS-1.3-001	Accountability 9.10.1
MS-1.3-002	Accountability 9.10.1
MS-1.3-003	Accountability 9.10.1
MS-2.2-001	Safety 4.9.2
MS-2.2-002	Data Governance 8.2.1
MS-2.2-003	Data Governance 8.3.1
MS-2.2-004	Data Governance 8.3.2
MS-2.3-001	Safety 4.1.1 Robustness 6.1.1
MS-2.3-002	Safety 4.1.1
MS-2.3-003	Safety 4.1.1
MS-2.3-004	Safety 4.1.1
MS-2.5-001	Robustness 6.7.1
MS-2.5-002	Robustness 6.7.2
MS-2.5-003	Robustness 6.7.2
MS-2.5-004	Robustness 6.7.2
MS-2.5-005	Data Governance 8.1.1
MS-2.5-006	Robustness 6.7.1
MS-2.6-001	Safety 4.8.1
MS-2.6-002	Safety 4.8.1
MS-2.6-003	Safety 4.3.2
MS-2.6-004	Safety 4.8.1
MS-2.6-005	Security 5.11.1
MS-2.6-006	Security 5.10.1 Security 5.11.1

MS-2.6-007	Security 5.2.1 Safety 4.1.1
MS-2.7-001	Security 5.2.1 Security 5.6.1
MS-2.7-002	Security 5.2.1
MS-2.7-003	Safety 4.9.1 Safety 4.9.2
MS-2.7-004	Security 5.2.1
MS-2.7-005	Safety 4.9.1 Safety 4.9.2
MS-2.7-006	Accountability 9.5.4
MS-2.7-007	Safety 4.1.1
MS-2.7-008	Safety 4.3.2
MS-2.7-009	Security 5.2.1 Security 5.6.1 Security 5.7.1
MS-2.8-001	Accountability 9.1.1
MS-2.8-002	Safety 4.1.1 Data Governance 8.2.1
MS-2.8-003	Safety 4.9.1 Safety 4.9.2
MS-2.8-004	Accountability 9.10.1
MS-2.9-001	Explainability 2.2.1
MS-2.9-002	Safety 4.3.1 Fairness 7.6.1 Data Governance 8.1.1 Data Governance 8.3.1
MS-2.10-001	Safety 4.1.1
MS-2.10-002	Safety 4.9.1 Safety 4.9.2
MS-2.10-003	Data Governance 8.1.1
MS-2.11-001	Safety 4.1.1
MS-2.11-002	Fairness 7.2.1
MS-2.11-003	Fairness 7.7.1 Inclusive Growth, Societal & Environmental Wellbeing 11.1.1 Inclusive Growth, Societal & Environmental Wellbeing 11.2.1
MS-2.11-004	Fairness 7.8.1
MS-2.11-005	Fairness 7.8.1
MS-2.12-001	Inclusive Growth, Societal & Environmental Wellbeing 11.1.1
MS-2.12-002	Inclusive Growth, Societal & Environmental Wellbeing 11.1.1
MS-2.12-003	Inclusive Growth, Societal & Environmental Wellbeing 11.1.1
MS-2.12-004	Inclusive Growth, Societal & Environmental Wellbeing 11.1.1
MS-2.13-001	Safety 4.10.1
MS-3.2-001	Safety 4.7.1

MS-3.3-001	Inclusive Growth, Societal & Environmental Wellbeing 11.1.1
MS-3.3-002	Accountability 9.10.1
MS-3.3-003	Fairness 7.2.1
MS-3.3-004	Transparency 1.1.6
MS-3.3-005	Accountability 9.10.1
MS-4.2-001	Security 5.9.1
MS-4.2-002	Security 5.9.1 Robustness 6.7.1
MS-4.2-003	Explainability 2.2.1
MS-4.2-004	Human agency & oversight 10.3.2
MS-4.2-005	Accountability 9.10.1
MG-1.3-001	Safety 4.3.1
MG-1.3-002	Safety 4.5.2
MG-2.2-001	Safety 4.3.1
MG-2.2-002	Safety 4.9.1 Safety 4.9.2
MG-2.2-003	Safety 4.9.1 Safety 4.9.2
MG-2.2-004	Fairness 7.8.1
MG-2.2-005	Safety 4.8.1
MG-2.2-006	Safety 4.2.1
MG-2.2-007	Safety 4.9.1
MG-2.2-008	Accountability 9.10.1
MG-2.2-009	Data Governance 8.3.2
MG-2.3-001	Accountability 9.5.4
MG-2.4-001	Accountability 9.4.1
MG-2.4-002	Accountability 9.5.4
MG-2.4-003	Accountability 9.5.4
MG-2.4-004	Accountability 9.4.1
MG-3.1-001	Accountability 9.7.1
MG-3.1-002	Accountability 9.7.1
MG-3.1-003	Accountability 9.7.1
MG-3.1-004	Data Governance 8.1.1 Data Governance 8.3.1
MG-3.1-005	Accountability 9.7.1
MG-3.2-001	Explainability 2.2.1
MG-3.2-002	Safety 4.3.2
MG-3.2-003	Data Governance 8.1.1
MG-3.2-004	Safety 4.8.1
MG-3.2-005	Safety 4.8.1
MG-3.2-006	Safety 4.8.1
MG-3.2-007	Data Governance 8.5.1
MG-3.2-008	Safety 4.8.1
MG-3.2-009	Safety 4.3.2
MG-4.1-001	Accountability 9.10.1
MG-4.1-002	Safety 4.4.1
MG-4.1-003	Safety 4.9.1 Safety 4.9.2
MG-4.1-004	Safety 4.5.1

MG-4.1-005	Safety 4.4.1
MG-4.1-006	Data Governance 8.2.1
MG-4.1-007	Accountability 9.5.4
MG-4.2-001	Safety 4.4.1
MG-4.2-002	Accountability 9.5.4
MG-4.2-003	Transparency 1.1.1
MG-4.3-001	Accountability 9.5.4
MG-4.3-002	Robustness 6.7.1
MG-4.3-003	Accountability 9.5.4