SKILLS**future** SG | INFOCOMM MEDIA DEVELOPMENT AUTHORITY

SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY
SKILLS MAP – SENIOR ARTIFICIAL INTELLIGENCE/MACHINE LEARNING ENGINEER

Sector	Infocomm Technology
Track	Data and Artificial Intelligence
Sub-track	Machine Learning Engineering
Occupation	Artificial Intelligence/Machine Learning Engineer
Job Role	**Senior Artificial Intelligence/Machine Learning Engineer**
Job Role Description	The Senior Artificial Intelligence/Machine Learning Engineer oversees projects for the production of scalable and optimised artificial intelligence (AI)/machine learning (ML) models, and ensures communication and collaboration with appropriate stakeholders. He/She is responsible for evaluating techniques or algorithms used and ensuring performance of the models deployed, and guiding or coaching the team in achieving quality in technical areas of the projects. He works in a team setting and is proficient in statistics, scripting and programming languages required by the organisation. He is also familiar with the relevant software platforms on which the solution is deployed on. The Senior AI/Machine Learning Engineer is passionate about delivering end-to-end data projects, from scoping and discovery to post-deployment. He is skilled in stakeholder management, possesses the ability to communicate ideas and recommendations to and influence various internal stakeholders, both within and beyond the team.

	Critical Work Functions	**Key Tasks**	**Performance Expectations**
Critical Work Functions, Key Tasks and Performance Expectations	**Develop artificial intelligence (AI)/machine learning (ML) models for production**	Evaluate AI/ML model scaling and packaging codes for refinement	In accordance with: • Model AI Governance Framework • Personal Data Protection Act 2012, Personal Data Protection Commission
		Assess performance of production-level AI/ML models for scalability	
		Manage AI/ML development pipeline and infrastructure	
		Lead the extraction, transformation, loading and integration of unstructured data for modelling	
		Review scaled AI/ML models to ensure desired performance can be achieved when deployed	
		Drive optimisation of AI solutions to increase performance	
	Deploy AI/ML models	Oversee the deployment of AI/ML solutions	
		Create test plans for post-deployment	
		Communicate deployment issues and resolution plans to stakeholders	
		Lead the development and deployment of supervised and/or unsupervised techniques for problem solving	
	Manage AI/ML projects	Plan the end-to-end deployment of AI/ML solutions from initial testing, deployment, to optimisation in terms of system performance and run time	
		Lead project estimations and code reviews	
		Set project timelines and work quality guidelines	
		Apply project management tools and processes to ensure project is cost-effective	
		Communicate project objectives at critical junctions to obtain buy-in from all stakeholders	
		Deliver scalable AI/ML solutions	

	Technical Skills and Competencies		Generic Skills and Competencies	
Skills and Competencies	Business Needs Analysis	Level 5	Leadership	Advanced

	Change Management	Level 4	Developing People	Intermediate
	Cloud Computing	Level 4	Transdisciplinary Thinking	Advanced
	Computational Modelling	Level 4	Computational Thinking	Intermediate
	Computer Vision Technology	Level 5	Communication	Intermediate
	Configuration Tracking	Level 4		
	Data Design	Level 5		
	Data Engineering	Level 4		
	Data Governance	Level 5		
	Data Strategy	Level 5		
	Database Administration	Level 4		
	Emerging Technology Synthesis	Level 5		
	Intelligent Reasoning	Level 5		
	Pattern Recognition Systems	Level 5		
	Problem Management	Level 5		
	Project Management	Level 5		
	Security Architecture	Level 4		
	Self-Learning Systems	Level 5		
	Stakeholder Management	Level 5		
	System Integration	Level 4		
	Test Planning	Level 4		
	Text Analytics and Processing	Level 5		
Programme Listing	For a list of Training Programmes available for the ICT sector, please visit: www.skillsfuture.sg/skills-framework/ict			

The information contained in this document serves as a guide.