

SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – HEAD OF DATA SCIENCE AND ARTIFICIAL INTELLIGENCE			
Sector	Infocomm Technology		
Track	Data and Artificial Intelligence		
Occupation	Data Scientist/Artificial Intelligence Scientist		
Job Role	Head of Data Science and Artificial Intelligence		
Job Role Description	<p>The Head of Data Science and Artificial Intelligence formulates and implement data and artificial intelligence (AI) strategies to optimise business value derived from data assets. He/She guides the AI research direction to create new algorithms and models, and reviews the feasibility of translating research and development outcomes into data and AI solutions. He oversees the development of data and AI solutions for the business to inform strategy and planning, decision-making and drive performance. He identifies potential intellectual property commercialisation opportunities for AI solutions and/or models, and oversees the preparation and application for intellectual property rights.</p> <p>He manages a team 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.</p> <p>The Head of Data Science and Artificial Intelligence is a highly effective communicator, articulating the potential value and impact of data and AI solutions on the business and influencing key business stakeholders. He is a proactive and innovative individual, possessing a strong drive to succeed amidst an evolving business environment. He develops the data and AI team's technical and leadership capabilities, and ensures compliance to the organisation's data privacy policies, ethics and governance framework, and intellectual property legislation.</p>		
Critical Work Functions, Key Tasks and Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations
	Implement data and artificial intelligence (AI) strategy	Formulate and implement strategies to identify, acquire and use appropriate data and AI models	In accordance with: <ul style="list-style-type: none"> Model AI Governance Framework Personal Data Protection Act 2012, Personal Data Protection Commission
		Guide AI research direction based on the current and future needs of the organisation	
		Drive implementation of new data management technologies	
		Drive the organisation's AI research and development strategy and focus	
		Communicate and ensure compliance to the organisation's data privacy policies, and ethics and governance framework	
		Direct engagement initiatives to communicate the potential and value of data and AI across the organisation	
		Review research and development outcomes to ensure alignment with the organisation's vision, mission and values, and data and AI strategy	
		Establish internal policies and processes to perform regular model tuning to cater for changes in customer behaviour over time	
	Formulate objectives and requirements from a business perspective	Develop feasibility analysis plans for AI and Data Science Projects based on business requirements and expected outcomes	
Synthesise insights from research on emerging trends, market developments and environmental scans to support feasibility analysis			
Approve proposed AI solution for development based on an evaluation of cost-benefit, competitive and feasibility analysis			
Communicate insights of feasibility analysis and relevant success strategies with key business stakeholders for decision making			
Build partnerships with key service partners and customers within and across industries to accelerate the adoption of Data Science and AI initiatives			

	Manage intellectual property (IP) strategies, processes and procedures	Identify potential IP commercialisation opportunities for AI solutions and/or models				
		Liaise with external vendors on preparation and finalisation of IP applications				
		Ensure compliance to IP legislation and guidelines				
	Present data driven business value of data science/artificial intelligence (AI) models	Present data and AI model development outcomes to key stakeholders				
		Create leading-edge resources, including playbooks, guides, blog posts, videos, to advance data and AI within the organisation and for end-users				
		Present insights of data and AI model to key stakeholders				
		Articulate the potential business value and commercial impact derived from data and AI solutions				
	Manage people and organisation	Review operational strategies, policies and targets across teams and projects				
		Develop strategies for resource planning and utilisation				
		Review the utilisation of resources				
		Oversee the development of learning roadmaps for teams and functions				
		Establish performance indicators to benchmark effectiveness of learning and development programmes against best practices				
		Implement succession planning initiatives for key management positions				
	Skills and Competencies	Technical Skills and Competencies		Generic Skills and Competencies		
		Budgeting		Level 5	Problem Solving	Advanced
Business Agility		Level 5	Communication	Advanced		
Business Continuity		Level 5	Leadership	Advanced		
Business Innovation		Level 6	Interpersonal Skills	Advanced		
Business Needs Analysis		Level 5	Transdisciplinary Thinking	Advanced		
Business Performance Management		Level 6				
Business Risk Management		Level 5				
Change Management		Level 5				
Computer Vision Technology		Level 5				
Data Design		Level 5				
Data Engineering		Level 5				
Data Ethics		Level 5				
Data Governance		Level 5				
Data Strategy		Level 5				
Emerging Technology Synthesis		Level 5				
Intelligent Reasoning		Level 5				
Learning and Development		Level 6				
Manpower Planning		Level 5				

	Networking	Level 5	
	Organisational Analysis	Level 5	
	Pattern Recognition Systems	Level 5	
	People and Performance Management	Level 5	
	Performance Management	Level 5	
	Project Management	Level 6	
	Quality Standards	Level 5	
	Research	Level 5	
	Self-learning Systems	Level 5	
	Software Design	Level 5	
	Solution Architecture	Level 5	
	Stakeholder Management	Level 5	
	Strategy Implementation	Level 4	
	Strategy Planning	Level 5	
	Sustainability Management	Level 5	
	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.