

Specification of Competency Standards
for the Information & Communications Technology Industry
Unit of Competency

Functional Area - Data Science

Title	Perform and evaluate the autonomous decision making process
Code	111154L6
Range	This UoC involves performing the autonomous decision-making process with various approaches (such as AI and data mining) to identify significant patterns, and make probabilistic predictions for business intelligence. Various evaluation methods are used to evaluate the autonomous decision-making process
Level	6
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> 1. Understand the fundamental aspects of autonomy (See Remark 1), classification for autonomy levels and complexity issues of autonomous system design (See Remark 2) 2. Develop the autonomous decision-making process with various technologies (See Remark 3) to identify significant patterns and make probabilistic predictions for business intelligence 3. Familiar with various evaluation methods for the autonomous system, including ontology & phenomenology-based method and cognitive & computational-based methods
Assessment Criteria	The integrated outcome requirement of this UoC is the ability to develop and perform the autonomous decision making process to obtain significant patterns and probabilistic predictions with trustworthiness and reliability for business intelligence
Remark	<ol style="list-style-type: none"> 1. Fundamental aspects of autonomy include (but not limited to) perception, reflection, goal management, planning and self-adaptation. 2. Complexity issues of autonomous system design: degree of trustworthiness, autonomic complexity, design complexity and implementation complexity 3. The technologies include (but not limited to) statistical machine learning, computer vision, natural language processing, knowledge retrieval and reasoning, formal methods of planning, etc