

**SKILLS FRAMEWORK FOR MEDIA
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Analytics and Customer Insights					
TSC Title	Data Analytics					
TSC Description	Organise and systematically analyse structured or unstructured data to create insights					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		MED-ACE-2018-1.1	MED-ACE-3018-1.1	MED-ACE-4018-1.1	MED-ACE-5018-1.1	
		Identify and process data according to required formats	Conduct data studies and present insights and trends in datasets	Manage complex data analytics projects and produce insights of business value	Drive the organisation's data science capabilities and foster a culture of evidence-based decision making	
Knowledge		<ul style="list-style-type: none"> Types of data analytics Basic tools and techniques for data collection and cleaning Concepts of data quality Procedures to extract and process data sets Principles of data modelling and data visualisation Importance of the domain context for data science Underlying data structures involved for data science Methods to apply statistical techniques 	<ul style="list-style-type: none"> Tools and techniques for data collection, mining, cleaning and analysis Statistical principles underpinning data analysis techniques Principles of communicating data effectively Organisational domains and key business processes Methods to use exploratory visual analysis and predictive modelling Methods to develop machine learning algorithms Methods to build a data model Range of established and novel tools and techniques used in analysing data Methods to apply complex software tools to analyse data Statistical techniques, experimental techniques and hypothesis testing 	<ul style="list-style-type: none"> Statistical principles underpinning data analysis techniques Methods for pattern-based classification Data visualisation tools and techniques Techniques to create data codes and building prediction functions Methods to develop complex machine learning algorithms and automating data analytics processes Methods to measure the capability of the data science team Legal, regulatory, ethical and privacy considerations related to data analytics 	<ul style="list-style-type: none"> Tools and techniques for data collection, mining, cleaning and analysis Methods for pattern-based classification Data visualisation tools and techniques Principles of communicating data effectively Underlying principles behind data codes and prediction functions Data science techniques such as machine learning Legal, regulatory, ethical and privacy considerations related to data analytics 	

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<p>Abilities</p>		<ul style="list-style-type: none"> Identify data sources that will fulfil research and analysis requirements Perform database queries across multiple sources to extract relevant data Process data following standard procedures to facilitate data analysis Organise data into appropriate chart elements to report analytics outputs Use data mining, time series forecasting and modelling techniques to identify and predict trends and patterns in data Assist in the production of a range of business insight reports 	<ul style="list-style-type: none"> Integrate information from multiple datasets Apply predictive data modelling techniques to identify underlying trends and patterns in data using statistical computing tools, methods and procedures Identify patterns across multiple data sets to derive insights Develop prototype algorithms and proof of concept demonstrations Make decisions about which patterns are meaningful and which to further analyse Assemble data aggregations to build data models to help test problem hypotheses Use machine learning techniques to gain new insights from data Assess the business insights presented to determine impact of insights on organisation Support the creation of interactive visualisations of data and data study outcomes 	<ul style="list-style-type: none"> Manage complex data science projects Review data to ensure that planning parameters are captured in extracted datasets Configure data models to perform advanced analytics that will provide insights of business value Engage in scalable pattern discovery methods on big data to uncover insights Design effective and predictive dashboards to represent analytics outputs from large datasets Communicate insights to relevant stakeholders in a coherent and convincing manner Manage organisational capacity for performing data science projects 	<ul style="list-style-type: none"> Formulate the organisation's data science plans to support business objectives Lead the implementation of the data science strategy, policies, procedures and metrics to support organisational requirements Define and manage policies and programs for data stewardship and custodianship in line with legal, information security corporate risk and compliance requirements Develop tools to automate data science tasks and improve analytics capabilities Develop linkages of analytical outcomes to business objectives to influence business strategies Provide guidance on developing effective and predictive dashboards that represent analytics outputs from large datasets Drive the organisation's capabilities for performing data science projects Conduct horizon scans to identify new technologies and techniques for improving the effectiveness of data analytics 	
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