<table>
<thead>
<tr>
<th>TSC Category</th>
<th>Analysis</th>
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<tbody>
<tr>
<td>TSC</td>
<td>Data Analysis and Interpretation</td>
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</tbody>
</table>

**TSC Description**

Extract meaningful patterns and insights from data to improve organisational performance and decision-making

<table>
<thead>
<tr>
<th>TSC Proficiency Description</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Level 6</th>
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<td>LNS-DAT-3017-1.1</td>
<td>LNS-DAT-4017-1.1</td>
<td>LNS-DAT-5017-1.1</td>
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### Knowledge

- Types of data
- Stages of data analysis
- Data design documentation
- Data cleaning techniques
- Data terminologies
- Types of data
- Stages of data analysis
- Data design documentation
- Data cleaning techniques
- Data terminologies
- Scales of measurement
- Tools to support data analysis
- Frameworks for qualitative and quantitative analysis
- Statistical analysis
- Data mining techniques
- Types and uses of data
- Phases of logical data modelling
- Data design documentation
- Scales of measurement
- Tools to support data analysis
- Frameworks for qualitative and quantitative analysis
- Statistical analysis
- Data mining techniques
- Problems associated with data interpretation
- Hypotheses testing methods
- Theories of data science
- Theories of data model design
- Theories of data governance
- Evaluation of design solutions
- Models of interpretable machine learning
- Trends of data analytics
- Organisational strategies

### Abilities

- Identify information requirements for data analysis
- Check data for completeness and accuracy
- Remove data that are incomplete or do not make sense to analyse
- Identify limitations and drawbacks of data sets and sample sizes
- Liaise with stakeholders to understand their data requirement needs, using appropriate data terminologies
- Manipulate data to identify patterns and relationships between variables
- Create logical data models for stakeholders, using appropriate terminologies and techniques
- Create data design documentation to reflect data analyses and design solutions
- Verify the validity and reliability of data used for analysis
- Define hypotheses to measure and test, to solve specific organisational problems
- Implement data analysis processes for the organisation
- Analyse findings to draw conclusions about identified problems or research
- Evaluate data design models against stakeholder and/or organisational requirements
- Develop data design solutions to meet stakeholder and organisational needs
- Translate insights into recommendations to facilitate organisational competitive advantage
- Conceptualise new research studies for the organisation
- Study data changes over time to deduce short-term and long-term trends
- Set up standardised definitions and protocols
| · Apply appropriate data analysis techniques to derive findings | · Conduct data exploration exercises to examine relationships between different variables | for how stakeholders use and interact with data across the organisation |