Statistician

Statisticians apply statistical methods and models to real world problems to create actionable insights.

Statisticians use statistical theory and techniques to collect, interpret and analyse quantitative data to produce useful statistics that highlight trends, relationships or patterns in data. They are highly numerate and have an excellent understanding of statistical computing programs and packages.

Statisticians collect and manipulate data, leverage computer systems and integrate algorithms to inform their actions. They develop statistical reports and insights and present their findings using a variety of communication tools and techniques, to inform decision making, policies and programs.

They work in partnership with data users, other data professionals and business domain experts.

At a glance

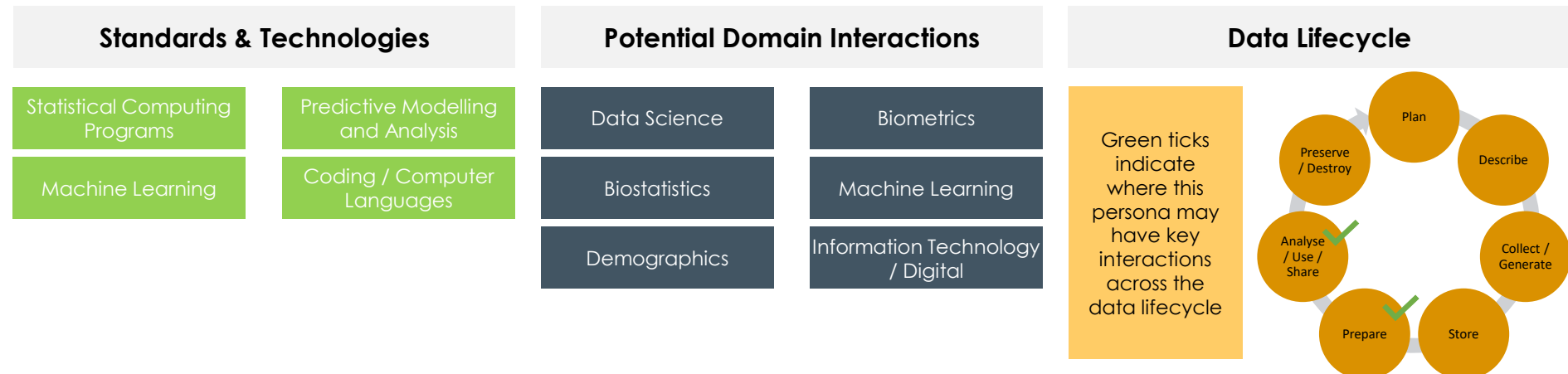- Statistical Modelling
- Machine Learning
- Data Analysis
- Econometrics
- Quality, governance, and risk management
- Statistical theory and techniques
- Numeracy

Standards & Technologies

Statistical Computing Programs	Predictive Modelling and Analysis
Machine Learning	Coding / Computer Languages

Potential Domain Interactions

Data Science	Biometrics
Biostatistics	Machine Learning
Demographics	Information Technology / Digital

Data Lifecycle

Green ticks indicate where this persona may have key interactions across the data lifecycle

Plan · Describe · Collect / Generate · Store · Prepare · Analyse / Use / Share · Preserve / Destroy

Statistician

Level 1 | Foundation	Level 2 | Intermediate	Level 3 | Advanced
Apply mathematical models and numerical analysis methods to simulate processes and perform computations, adjusting models as needed.	Formulate and apply mathematical models and numerical analysis methods to simulate processes, develop algorithms and perform computations, adjusting models as needed.	Formulate and apply advanced mathematical models and numerical analysis methods to simulate processes, develop algorithms and perform computations, adjusting models as needed.
Analyse data and produce relevant statistics to identify patterns, trends and relationships in data.	Analyse and produce relevant statistics to identify and describe patterns, trends and relationships in data.	Analyse complex data and produce relevant statistics to identify and describe patterns, trends and relationships in data.
Communicate findings and insights derived from basic data to a range of stakeholders using existing reports and dashboards .	Communicate findings and insights from data to technical and non-technical stakeholders using presentations, reports and dashboards that may require creation or modification using visualisation techniques, with a focus on stakeholder requirements.	Generate high value actionable insights from highly complex data and communicate findings to a broad range of stakeholders using presentations, reports, dashboards, and other visualisation techniques with a focus on the strategic environment and what stakeholders will need in the future.
Evaluate the reliability and utility of source information to assess the impact of interventions and determine the statistical validity of observed changes in data.	Evaluate and describe the reliability and utility of source information to assess the impact of interventions and determine the statistical validity of observed changes in data, providing tailored solutions to improve insights.	Evaluate and describe the reliability and utility of source information to assess the impact of interventions and determine the statistical validity of observed changes in data, providing innovative solutions to improve insights.
Develop individual capability.	Support the uplift of capability of juniors and peers.	Build the capability of the Statistician community across the organisation and other APS agencies.
Collaborate with relevant stakeholders to understand and design experiments and analytical solutions that support positive outcomes.	Support design experiments to test the performance of alternative analytical solutions that support positive outcomes.	Collaborate with business owners and other relevant stakeholders to apply and design experiments and analytical solutions that support positive outcomes.
Collaborate with other data and IT professionals to support process improvements.	Collaborate with other data and IT professionals to support process improvements, recommend system modifications, and contribute to policies for data governance and ethics.	Collaborate with other data and IT professionals to identify new trends and innovations, process improvements, recommend system modifications, and assist data professionals that specialise in data governance and research.
Understand and support the management of client expectations.	Understand and manage client expectations.	Understand and manage client expectations, and negotiate with and inform key stakeholders to develop and implement advanced analytical solutions that are aligned with organisational requirements and goals and exceed business owners and stakeholders' immediate requirements.

Level 1

APS DCF

① STS	① SCM
① SPC	① USE
① EXP	① RSC

SFIA

③ DATS	③ VISL
③ MLNG	② BINT
③ SCMO	④ DATM
④ DENG	

Level 2

APS DCF

② STS	② SCM
② SPC	② USE
② EXP	② RSC

SFIA

④ DATS	④ VISL
④ MLNG	③ BINT
④ SCMO	⑤ DATM
⑤ DENG	

Level 3

APS DCF

③ STS	③ SCM
③ SPC	③ USE
③ EXP	③ RSC

SFIA

⑤ DATS	⑤ VISL
⑤ MLNG	④ BINT
⑤ SCMO	⑥ DATM
⑥ DENG	

Select the boxes for more information.

APS DCF = Australian Public Service Data Capability Framework   *SFIA = Skills Framework for the Information Age*