



A free resource provided by Our Community's Innovation Lab
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Replace placeholders with your own content. As you complete each section, delete
anything that isn't relevant, as well as instructions (written in blue text, like this).

Data Scientist Position Description

About us

(Include here an overview of your organisation)

{Organisation Name} is a not-for-profit organisation that provides ...

About the role

(Include here an overview of projects this role may be part of and an overview of key responsibilities)

State the general nature, level and purpose of the job and provide a brief description of its duties and responsibilities. This section will be used for the job advertisement. It may be easier to write the general summary after completing other sections of the job description. For example:

We're looking for a savvy Data Scientist to join our growing team of analytics experts.

You will need to be an ethical, knowledgeable, down-in-the-dirt practitioner (as you may have to do a lot of the grunt work yourself). You will help us to learn more about what we have and what we could do more with – and help us uncover what we don't know we don't know. You will work with our {technology architects and developers, subject matter experts, wordsmiths and graphic designers} to help us find a path through the figures to create meaning for us and for the not-for-profit organisations, government agencies and other groups that

we work with. You will also benefit from mentoring from experts in the field from time to time.

You will have experience in collecting and wrangling data. We don't expect you to know everything, but you need to have a good grounding in research methods and data analysis and be the sort of person who will seek out (with our support) new information and skills as the job demands. We expect you to be keenly interested in the latest trends and developments in data collection, analysis and visualisation.

You will need to be able to work independently and be confident in managing your own task list (in alignment with our priorities), but you will get lots of support and direction as required. We want you to have plenty of opportunity to shape your own role, and for you to be as excited about its potential as we are.

Main activities / key accountabilities

(Include here a list of key duties or tasks that the position will be responsible for)

Below is a list of example duties/tasks/activities you might find useful. They are grouped together by type – keep only those that most suit your position.

Business acumen, teamwork and reporting

- Take ownership of your output, while working closely with others to ensure the right people know the right things at the right time.
- Lead and manage staff, providing project management leadership, expert advice, and guidance to team members, including the planning, delegation and quality assurance of work, management of performance and mentoring of staff.
- Serve as a subject matter expert for clients/customers, communicating data science concepts to broad technical and non-technical audiences.
- Communicate findings clearly and responsively to a range of organisational, volunteer and public stakeholders – to inform and educate them through reports, presentations and in-house tutorials.
- Work closely with stakeholders and domain experts to provide meaningful graphical presentations, dashboards, insights and analysis.
- Work with stakeholders throughout the organisation to identify opportunities for leveraging existing data and develop methods of collecting new data.
- Work closely with the business to understand which business problems can be solved through ML and data science practices and techniques.

- Proactively build and maintain positive relationships with key stakeholders to facilitate a partnership approach.
- Collaborate with internal team members to fully understand business requirements and desired business outcomes.
- Collaborate with different functional teams to implement models and monitor outcomes.

Project management

- Conduct projects and be accountable for the successful delivery and completion of the projects/sub projects within resourcing, timeline and budget parameters.
- Ensure project delivery within timelines and budget requirements.
- Manage and oversee the full life cycle of projects to meet organisational objectives.
- Manage and deliver projects.
- Monitor and evaluate projects to ensure organisational objectives are met.
- Conduct research, analysis and implementation of projects based on defined outcomes and outputs.
- Keep accurate and complete records of work activities in accordance with legislative requirements, information security and privacy policy requirements.

Technical

- Develop custom data models and algorithms to apply to data sets.
- Create, modify, and enhance source code including code reviews and ensuring overall quality and efficiency.
- Deploy models into production environments and update, build metrics, manage drift and track over time.
- Provide data science and ML knowledge expertise, contribute to technical discussions, and communicate ideas, plans, and results to key stakeholders.
- Design solutions that seek to increase automation, CI, testability, simplicity, scalability, predictability, efficiency, security, performance, and maintainability.
- Ensure the ML platform is providing the required data, functionality, and performance.
- Build well-managed data solutions and capabilities providing meaningful dashboards and insights to the team.

- Architect and develop ML models.
- Research, test and implement appropriate ML algorithms and tools.
- Build deep learning solutions using framework such as PyTorch and TensorFlow.
- Evaluate research papers and incorporate into models.
- Develop processes and tools to monitor and analyse model performance and data accuracy.
- Assess the effectiveness and accuracy of new data sources and data gathering techniques.

Analysis

- Collect and manipulate data from databases to drive optimisation and improvement of processes and strategies.
- Select appropriate data sets and design & develop data pipelines.
- Analyse data and identify meaningful, actionable insights to allow improved decision making for the company and our customers.
- Write code to analyse a variety of data sources, including survey data, user behaviour and website performance data to identify useful insights, opportunities and areas for improvement.
- Design, monitor and analyse AB experiments for some of our products.
- Use predictive modelling to increase and optimise target outcomes, such as donor experiences, donation income generation, and advertising targeting.
- Stay on top of the latest trends and developments in data collection, analysis and visualisation.
- Participate in our data governance, ensuring our ethics are upheld and treating our data, and data belonging to our stakeholders, with utmost respect.

Key selection criteria

(Include here any formal qualifications, technical expertise, licences, knowledge, skills and experience required to undertake this position)

Essential & Desirable

Identify the minimum set of criteria **required** to competently perform the job duties. A long list of essential requirements may deter some candidates (particularly those who face other barriers such as gender or racial inequality).

Please complete this section in bullet form. Below is a list of example criteria you might find useful. Select the criteria that most suit your position, as these will be used to screen applicants throughout the selection process.

Education/Experience

Include a suggested number of years of related experience; e.g. “Previous experience in healthcare or health insurance environment required (usually three to five years)” or “Five to seven years of project management experience”.

- Degree-qualified (Bachelor or Master or Doctorate) in statistics, mathematics, computer science or adjacent field.
- 2+ years of experience in developing predictive algorithms or machine learning (ML) solutions.
- Experience working with large, complex source systems, and working with developers of those systems to dig in and understand the complexities of the data.
- Experience working with new data sources from a variety of stakeholders (including data wrangling, cleaning, pre-processing etc).
- A record of achievement in an analytical role extracting value from quantitative data.
- Experience with exploring and manipulating large datasets through applications or programming interfaces.
- Experience in data mining and developing predictive algorithms.
- Experience in predictive modelling in a commercial environment.
- Experience using version control and agile software development systems.

Technical Skills/Knowledge

Consider including criteria that related to knowledge of datasets relevant to your sector (e.g. AEDC for education) and/or IT platforms used by your organisation.

- Proficiency in exploring and manipulating large datasets through applications or programming interfaces.
- Ability to determine accurate modelling technique based on the complexity of the problem.
- Working knowledge of supervised ML techniques, linear regression and other fitting techniques.
- Understanding of how to build and deploy ML models and manage over time.
- Familiarity with AB testing and ML.

- Cloud computing experience, including maintenance of cloud resources.
- Proven ability to solve complex business problems with scalable solutions using ML practices and through applying data science and deep learning approaches.

Tools/Languages

Be clear about what tools you are already using in the organisation or would like to adopt. It is important to consider the sustainability of data analysis solutions should this person exit your organisation.

- Extensive experience in Python, deep learning toolkits (e.g. Keras, TensorFlow, PyTorch) and standard processing libraries for data science (e.g. numpy, scipy, scikit-learn, pandas, matplotlib).
- Extensive experience writing and optimising SQL queries.
- Experience in SQL, database design and development including best practice in data sharing and database security and maintenance.
- Proven experience in Tableau, Snowflake, SQL or data ETLs.
- Experience in dashboarding/visualisation (either MS Power BI or Tableau).

Communication/Teamwork

- Able to convey complex topics to team members.
- Excellent communicator, with the capacity to translate numbers to business insights.
- Strong interpersonal and leadership skills with effective communication (both written and verbal) skills.
- Excellent scientific communication skills.
- Ability to pick up new skills (e.g. programming, statistics) as the need arises, with a passion for learning.
- Superior analytical and problem-solving skills, with demonstrated intellectual and analytical rigor.
- Team oriented, collaborative, diplomatic, and flexible, with excellent presentation skills.
- High-level attention to detail with a strong focus on quality and continuous improvement.
- Ability to manage multiple projects with competing deadlines and various stakeholders.
- Experience working in a team setting and desire to take leadership roles within a team.

- Well-developed organisational skills with the ability to work autonomously within a team environment.
- Self-organised with the ability to operate independently with little or no direction and deliver quality work.
- Sound time management skills together with the ability to deliver to tight timeframes.
- Organised and methodical nature with the ability to manage competing priorities.

Personal qualities

(Include here other qualities or abilities that will make a person successful in this role)

At a personal level you will:

- Have a can-do attitude and enjoy interacting with a broad range of stakeholders, customers or clients.
- Have a strong work ethic and manage priorities effectively.
- Be trustworthy and reliable – you always do what you say you will do.
- Be proactive and a strategic thinker.
- Be able to juggle multiple tasks and set own priorities.
- Be an engaged listener.
- Be naturally curious and passionate about data and research.
- Have a strong desire to learn new skills and improve yourself.
- Be a committed collaborator with a strong desire to obtain the best results.
- Have a keen interest in making data tell a story.
- Pride yourself on exceeding expectations, no matter the task at hand.
- Have a strong eye for detail, ability to think critically and question results, and a passion for quickly delivering results.
- Proactively keep people informed about the status of your projects and highlight any issues early that may impact their delivery.
- Have a keen interest in the development of not-for-profit entities and social enterprises.

Other relevant information

(Include here all other important information or requirements of your organisation' such as; citizenship requirements, police checks etc.)

Our office is located at ...

This role can be structured as a full-time or part-time position. We welcome parents returning to the workforce and would be happy to consider a job share arrangement.

Some intra and interstate travel may occasionally be required.

The successful candidate:

- must be an Australian citizen, permanent resident or hold a valid work permit or visa.
- may be required to obtain Police Check, Working with Children Check
- will be subject to a probationary period of three (3) or six (6) months.

In addition to the suggestions above, consider the following:

- For paid roles, include job grade, salary and direct reports. To determine appropriate salary ranges for a Data Scientist, it may be worth consulting the [ICT Professionals Salary Report](#) in conjunction with the [SFIA Skills Framework](#) and [Pro Bono Salary Survey](#).
- For consultant/outsourced roles, what will be the duration and indicative rate? Do they need to bring their own equipment?
- For volunteer roles, what will they gain from the role? For example, what skills/experience, and what positive impact will be made? Furthermore, you should be transparent about the possibility of paid work afterwards.