

Role Description

Data Scientist



Cluster	Stronger Communities
Agency	NSW Police Force
Command/Business Unit*	Workforce Safety
Location*	Surry Hills
Classification/Grade/Band*	Clerk 7-8
ANZSCO Code	311499
PCAT Code	1119192
NSWPF Role Number	
Date of Approval	22/05/2020
Agency Website	www.police.nsw.gov.au

Agency overview

The NSW Police Force (NSWPF) vision is for a 'Safe and Secure New South Wales', which is achieved by police working with the community to reduce violence, crime and fear.

It is one of the largest police forces in the western world, with more than 20,000 NSW Police Force employees, including more than 16,000 sworn officers providing a range of law and order services 24 hours a day, seven days a week to the socially, geographically and culturally diverse community of NSW.

The organisation has four function lines, based across a number of locations. Metropolitan Field Operations and Regional NSW Field Operations provide frontline services directly to the community. Investigations & Counter Terrorism provides investigative, technical and counter terrorism expertise. Corporate Services, provides business support services such as technology and communication, education and training and corporate human resources functions.

The NSW Police Force is a proud employer of a diverse range of people. This includes, but is not limited to, people who identify as Aboriginal or Torres Strait Islander, LGBTIQ, people, with disability, people who come from a variety of cultural, religious or ethnic backgrounds, and workers of all ages. The NSWPF is committed to reflecting the diverse community we serve and creating an inclusive and respectful workplace for all employees, where difference is embraced, contributions are valued, and everyone has a sense of connection and belonging. This enables the growth and development of a talented and diverse workforce across the state, in a wide range of roles, at all levels.

The NSWPF *Statement of Values* and *Code of Conduct & Ethics* outlines appropriate behaviour for all NSW Police Force staff. All employees of NSWPF are expected to ensure ethics are incorporated into all aspects of their work making ethical behaviour, practices and decision making a part of daily routine. This further extends to ensuring confidentiality and information security is maintained at all times.

Work, Health and Safety legislation requires all employees to have specific responsibilities. This role is responsible for ensuring that the work for which their position is responsible is carried out in ways which safeguard the health and safety of all workers.

Primary purpose of the role

The position will provide high quality data analysis on WHS and workers compensation performance. The role involves processing and cleaning data for analysis, performing analysis using predictive modelling and machine learning techniques. The position will present results in a clear, concise and practical manner for

use by the NSWPF Senior Executive, Commanders and Managers and other stakeholders. The role also involves delivering high quality strategic submissions identifying emerging issues and managing and contributing to key projects assigned to the team.

Key accountabilities

- Selecting features, building and optimizing classifiers using machine learning techniques in an applied environment.
- Enhancing data collection procedures to include information that is relevant for building analytic systems and predictive modelling.
- Processing and cleaning data for analysis, presenting results of analyses, identifying trends and issues.
- Perform data mining, including aggregation, validation and reconciliation, advanced modelling techniques and explaining results in a clear manner.
- Develop new insights across available data using programming languages and statistical packages.
- Plan, implement and supervise the creation of analytical products which inform, and support work undertaken by key stakeholders and strategic decision making of NSWPF, oversight agencies, and stakeholders.
- Develop, foster and maintain effective relationships with external agencies, professional networks and key stakeholders, working closely with management to provide relevant and timely information and advice to Commanders.
- Develop and continually enhance trend reports, products and databases. Provide effective leadership, assist in development of staff, identify staff training needs and explore staff development opportunities. Deliver presentations on data and information as required.

Key challenges

- Support, assess and manage effective research and systems, processes and projects, ensuring a timely dissemination of information to meet client needs.
- Foster and build a collaborative team environment and endeavour to maintain an appropriately skilled and productive team.
- Maintain contemporary knowledge of relevant legislation and policies, best practice, issues relating to WHS and workers compensation, relevant external and internal trends and emerging issues in the macro and micro environment.

Key relationships

Who	Why
Internal*	
Manager	<ul style="list-style-type: none"> • Escalate issues, keep informed, advise and receive instructions • Provide regular updates on key projects, issues and priorities • Work cooperatively within a team, exchange information and assist other team members to achieve work outcomes
Team members	<ul style="list-style-type: none"> • Mentor and develop team members • Monitor workload, competition and performance • Ensure team members comply with Law, Policy and the NSWPF Ethical Framework • Maintain accountability
Other NSWPF staff	<ul style="list-style-type: none"> • Provide briefing, products and advice

Who	Why
External	
EML	<ul style="list-style-type: none"> • Liaison and co-operation • Information sharing and problem solving • Escalate issues that are relevant
icare	<ul style="list-style-type: none"> • Liaison and co-operation • Information sharing and problem solving • Escalate issues that are relevant

Role dimensions

Decision making

Day to day decision making responsibility and authority for determining own and team priorities, identifying and implementing best practice processes, providing information and support for key stake holders and the NSWPF Executive.

Reporting line

- Manager

Direct reports

- Nil

Budget/Expenditure

- Nil

Essential requirements






- A Bachelor or Master's Degree in a highly quantitative field (Data Science, Computer Science, Machine Learning, Statistics, Mathematics etc) or equivalent experience.
- Excellent understanding of machine learning methods such as Naive Bayes, Decision trees, Random Forests etc.
- Experience with common data science toolkits, particularly R.
- Able to write serviceable code (e.g. Python, R) in a professional applied data analysis team.
- Obtain and maintain the requisite security clearances for this position.

Capabilities for the role*

The NSW Public Sector Capability Framework applies to all NSW public sector employees. The Capability Framework is available at www.psc.nsw.gov.au/capabilityframework

Capability summary

Below is the full list of capabilities and the level required for this role. The capabilities in bold are the focus capabilities for this role. Refer to the next section for further information about the focus capabilities.

NSW Public Sector Capability Framework*		
Capability Group	Capability Name	Level
 Personal Attributes	Display Resilience and Courage	Adept
	Act with Integrity	Intermediate
	Manage Self	Adept
	Value Diversity	Intermediate
 Relationships	Communicate Effectively	Adept
	Commit to Customer Service	Foundational
	Work Collaboratively	Intermediate
	Influence and Negotiate	Intermediate
 Results	Deliver Results	Intermediate
	Plan and Prioritise	Intermediate
	Think and Solve Problems	Adept
	Demonstrate Accountability	Intermediate
 Business Enablers	Finance	Foundational
	Technology	Intermediate
	Procurement and Contract Management	Foundational
	Project Management	Adept
 People Management	Manage and Develop People	Foundational
	Inspire Direction and Purpose	Foundational
	Optimise Business Outcomes	Foundational
	Manage Reform and Change	Intermediate

Focus capabilities*

The focus capabilities for the role are the capabilities in which occupants must demonstrate immediate competence. The behavioural indicators provide examples of the types of behaviours that would be expected at that level and should be reviewed in conjunction with the role's key accountabilities.

NSW Public Sector Capability Framework		
Group and Capability	Level	Behavioural Indicators
Personal Attributes Display Resilience and Courage	Adept	<ul style="list-style-type: none"> Be flexible, show initiative and respond quickly when situations change Give frank and honest feedback/advice Listen when ideas are challenged, seek to understand the nature of the criticism and respond constructively Raise and work through challenging issues and seek alternatives Keep control of own emotions and stay calm under pressure and in challenging situations
Relationships	Adept	<ul style="list-style-type: none"> Tailor communication to the audience Clearly explain complex concepts and arguments to individuals and groups

NSW Public Sector Capability Framework		
Group and Capability	Level	Behavioural Indicators
Communicate Effectively		<ul style="list-style-type: none"> Monitor own and others' non-verbal cues and adapt where necessary Create opportunities for others to be heard Actively listen to others and clarify own understanding Write fluently in a range of styles and formats
Relationships Work Collaboratively	Intermediate	<ul style="list-style-type: none"> Build a supportive and co-operative team environment Share information and learning across teams Acknowledge outcomes which were achieved by effective collaboration Engage other teams/units to share information and solve issues and problems jointly Support others in challenging situations
Results Deliver Results	Intermediate	<ul style="list-style-type: none"> Complete work tasks to agreed budgets, timeframes and standards Take the initiative to progress and deliver own and team/unit work Contribute to allocation of responsibilities and resources to ensure achievement of team/unit goals Seek and apply specialist advice when required
Results Think and Solve Problems	Adept	<ul style="list-style-type: none"> Research and analyse information, identify interrelationships and make recommendations based on relevant evidence Anticipate, identify and address issues and potential problems and select the most effective solutions from a range of options Participate in and contribute to team/unit initiatives to resolve common issues or barriers to effectiveness Identify and share business process improvements to enhance effectiveness
Business Enablers Technology	Intermediate	<ul style="list-style-type: none"> Apply computer applications that enable performance of more complex tasks Apply practical skills in the use of relevant technology Make effective use of records, information and knowledge management functions and systems Understand and comply with information and communications security and acceptable use policies Support the implementation of systems improvement initiatives and the introduction and roll-out of new technologies
Business Enablers Project Management	Adept	<ul style="list-style-type: none"> Prepare clear project proposals and define scope and goals in measurable terms Establish performance outcomes and measures for key project goals, and define monitoring, reporting and communication requirements Prepare accurate estimates of costs and resources required for more complex projects Communicate the project strategy and its expected benefits to others Monitor the completion of project milestones against goals and initiate amendments where necessary

NSW Public Sector Capability Framework

Group and Capability	Level	Behavioural Indicators
People Management Manage and Develop People	Foundational	<ul style="list-style-type: none"> Evaluate progress and identify improvements to inform future projects
		<ul style="list-style-type: none"> Clarify the work required, and the expected behaviours and outputs Clearly communicate team members' roles and responsibilities Contribute to developing team capability and recognise potential in people Recognise good performance, and give support and regular constructive feedback linked to development needs Identify appropriate learning opportunities for team members Create opportunities for all team members to contribute Act as a role model for inclusive behaviours and practices Recognise performance issues that need to be addressed and seek appropriate advice

Version Control

Version	Summary of Changes	Date
V1.0	Benchmark PSC Data Scientist 7-8 RD 540 (minor change to Key Relationships External & Key Acct/challenge.)	05.04.2020

Roles attached

Position Number	Region	Position Number	Region	Position Number	Region	Position Number	Region
51150127	Workforce Safety						