



CAREERS SNAPSHOT

INFORMATION AND COMMUNICATIONS TECHNOLOGY

Which occupations in this industry are likely to have the **largest employment growth** over the next three years?

Which **TAFE NSW courses** are popular for people looking to get into these job roles and how much can you **earn**?

NUMBER	CAREER	JOB ADS	AVERAGE SALARY AND COURSES
1	 ICT PROJECT MANAGER	445 Job ads posted in last 3 months (NSW)	\$109,760 AVERAGE SALARY Diploma of Project Management (BSB51415) Advanced Diploma of Information Technology (ICT60115) Advanced Diploma of Information Technology Business Analysis (ICT60315) Advanced Diploma of Information Technology Project Management (ICT60415)
2	 DEVELOPER PROGRAMMER	1,025 Job ads posted in last 3 months (NSW)	\$93,910 AVERAGE SALARY CIV in Programming (ICT40515) Diploma of Software Development (ICT50715) Bachelor of Information Technology (Data Infrastructure Engineering) (HE20525)
3	 SOFTWARE ENGINEER	200 Job ads posted in last 3 months (NSW)	\$93,910 AVERAGE SALARY CIV in Programming (ICT40515) Diploma of Digital Media Technologies (ICT50915) Diploma of Software Development (ICT50715) Bachelor of Information Technology (Data Infrastructure Engineering) (HE20525)
4	 ICT CUSTOMER SUPPORT OFFICER	415 Job ads posted in last 3 months (NSW)	\$62,570 AVERAGE SALARY CIII in Information, Digital Media and Technology (ICT30115) CIV in Information Technology Support (ICT40215) CIV in Information Technology (ICT40115) CIV in Digital Media Technologies (ICT40815)
5	 WEB DEVELOPER	265 Job ads posted in last 3 months (NSW)	\$73,900* AVERAGE SALARY CIV in Web-Based Technologies (ICT40315) Diploma of Website Development (ICT50615) Diploma of Information Technology (ICT50115)

- 6. ICT SUPPORT ENGINEER
- 7. SYSTEMS ADMINISTRATOR
- 8. ICT SALES ASSISTANT
- 9. TELECOMMUNICATIONS NETWORK ENGINEER

- 10. DATABASE ADMINISTRATOR
- 11. COMPUTER NETWORK AND SYSTEMS ENGINEER
- 12. CHIEF INFORMATION OFFICER

- 13. ICT BUSINESS ANALYST
- 14. TELECOMMUNICATIONS ENGINEER
- 15. NETWORK ADMINISTRATOR

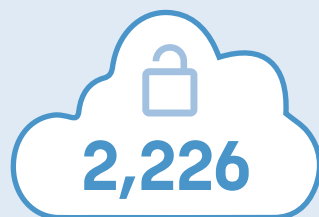
*Sourced from Indeed ([link](#))

SKILLS SHORTAGE

CYBER SECURITY



... The number of additional **CYBER SECURITY SPECIALISTS** Australia is expected to need over the next 10 years.



... The number of online job advertisements posted in Australia over the last 12 months for roles in this area.

TOP 5 SPECIALISED SKILLS

- 1 INFORMATION SECURITY
- 2 NETWORK SECURITY
- 3 STAKEHOLDER MANAGEMENT
- 4 CISCO CERTIFICATIONS
- 5 TEAMWORK/COLLABORATION

TOP 5 SOFTWARE / PROGRAMMING SKILLS

- 1 LINUX
- 2 UNIX
- 3 PYTHON
- 4 SPLUNK
- 5 SAP

Examples of TAFE NSW courses aligned to:

- Cyber Security Specialist: CIV in Cyber Security (22334VIC), Bachelor of Information Technology (Network Security) (HE20524), Statement of Attainment in Cyber Security

DATA SCIENTISTS

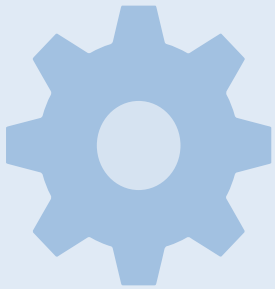
- The number of people employed as data scientists in Australia is expected to grow at a rate of 2.4% annually on average through to 2022, this would see an additional 38,000 people employed in this area between 2016 and 2022.
- Opportunities for data scientists are increasing across a range of industries in Australia. This includes a growing demand for data science skills in non-IT areas such as agriculture, healthcare and finance.
- Data science skills were listed in over 2,500 online job postings in Australia in the last 12 months.

TOP 5 SPECIALISED SKILLS FOR DATA SCIENTISTS:

1. PYTHON
2. MACHINE LEARNING
3. SQL
4. BIG DATA
5. R PROGRAMMING LANGUAGE

Note: Skills data is based on online job postings in Australia over the 12 months through to September 2018.





Based on the last three months of online job postings in Australia, **SOFTWARE DEVELOPER/ENGINEER** is the most in-demand occupational category in this industry area, with over 3,600 jobs advertised over this time. This is followed by **COMPUTER SYSTEMS ENGINEER/ANALYST**, with over 2,550 jobs posted.

Examples of TAFE NSW courses aligned to:

- Software Developer/Engineer: Diploma of Software Development (ICT50715)
- Computer Systems Engineer/Analyst: Advanced Diploma of Information Technology Business Analysis (ICT60315), Diploma of Information Technology (ICT50115)

WHAT SKILLS ARE EMPLOYERS LOOKING FOR MOST IN THIS INDUSTRY?*



**TEAMWORK/
COLLABORATION**



SQL



JAVASCRIPT

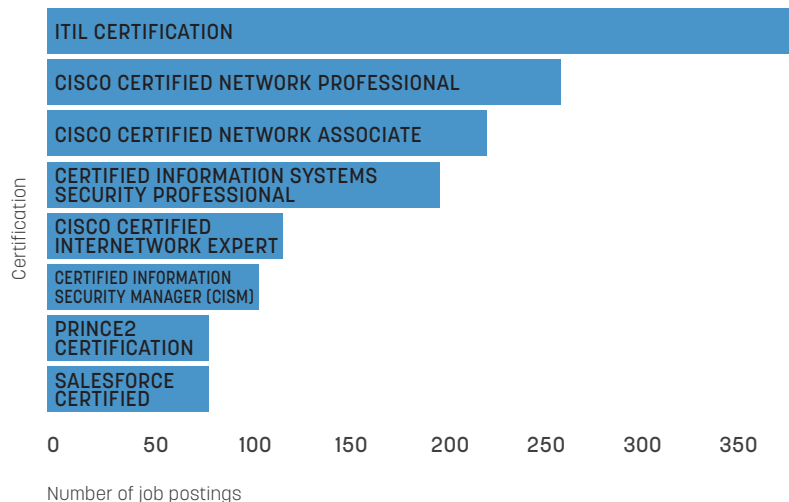


JAVA



**PROJECT
MANAGEMENT**

What industry-specific certifications are employers looking for most?



SELECT EMPLOYERS IN THE INDUSTRY*

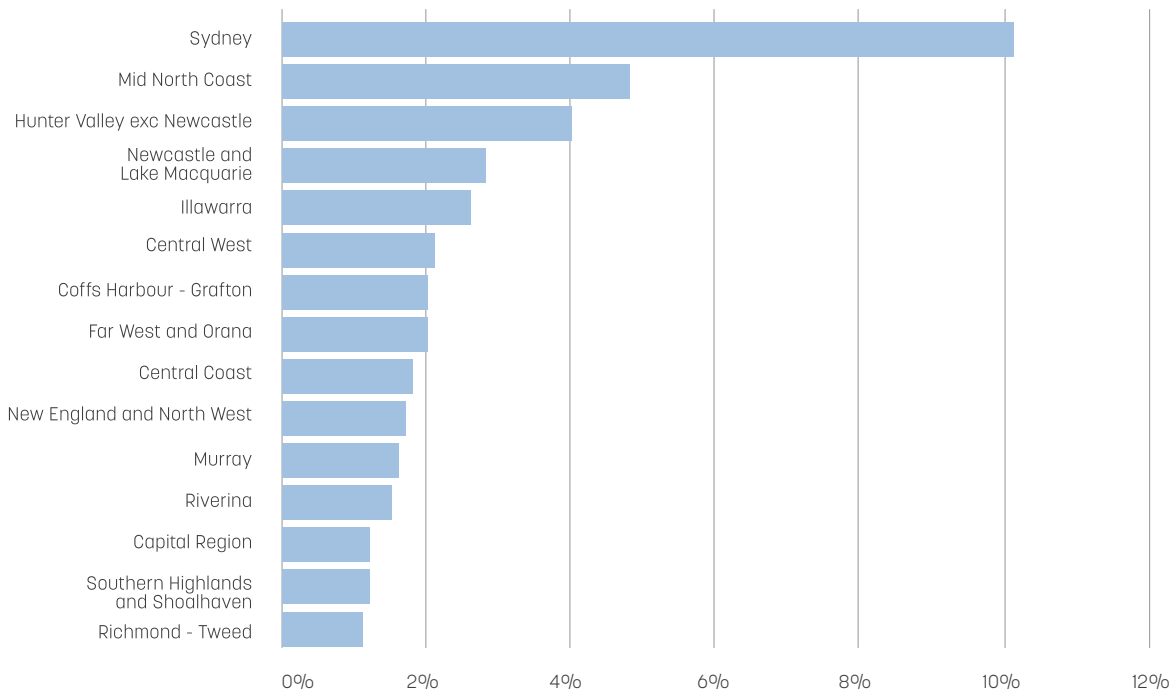
SINGTEL OPTUS Commonwealth Bank
STATE GOVERNMENT PTY LTD Oracle of Australia
 Corporation DIALOG
 Infosys
 Lodestone
 Management Consultants
 Deloitte Touche Tohmatsu
 Ltd Macquarie Group Ltd SAP AG Australian Government
 IBM

*Based on online job postings in Australia between June and September 2018

*These employers have been selected based on their job advertisement activity in Australia between June and September 2018.

DO JOB ADS IN THE INFORMATION AND COMMUNICATIONS TECHNOLOGY INDUSTRY ACCOUNT FOR MANY OF THE JOBS ADVERTISED IN MY REGION?

Information and Communications Technology jobs as % of all job ads posted in the region



Based on online job postings in Australia over the 12-month period through to June 2018.

SYDNEY REGION

In the SYDNEY region, the Information and Communications Technology industry accounted for the most job postings of all industry areas. Software Developer/Engineer was the most advertised position overall, with over 7,250 jobs advertised in the 12 months through to June 2018.



MID NORTH COAST REGION

In the MID NORTH COAST region, the Information and Communications Technology industry accounted for the fifth highest number of job postings of all industry areas. The most advertised job in this industry in the region was Software Developer/Engineer followed by Network/Systems Administrator.



Which sectors are likely to have the **fastest employment growth** over the next three years?

Forecast Employment Change for Growth Sectors [2018-2021]

9.1%

+8,072 jobs

Computer System Design and Related Services

1.9%

+648 jobs

Telecommunications Services

3.1%

+116 jobs

Data Processing, Web Hosting and Electronic Information Storage Services

Note: The chart above ranks the sectors by largest to smallest (left to right) employing sectors in 2018. Percentages reflect the forecast employment change between 2018 and 2021. The forecast number of additional jobs over this period has also been provided for each sector.

Sources: Industry employment forecast, job advertisement, top skills and certifications, and employer data have been provided by TAFE Strategy. Employment forecast data was sourced from Deloitte Access Economics in February 2017. All job advertisement data was sourced from the Burning Glass Technologies' Labor Insight™ Real-time Labor Market Information tool and is based on online job postings over a three-month period between June and September 2018 unless stated otherwise. Average salary data has been sourced from the Commonwealth Government's JobOutlook website unless stated otherwise. Cyber security specialists forecast workforce requirements were sourced from The Australian Cyber Security Growth Network. Data scientist occupation data was sourced from Deloitte Access Economics *The future of work: Occupational and education trends in data science in Australia*.

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