

Internet job postings: trending and emerging skills

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This infographic provides information on trending and emerging skills requested in internet job postings from 2014 to 2017.

The data are supplied by [Burning Glass Technologies](#) (2018). The 200 most requested skills by employers in internet job postings for each year were extracted and ranked accordingly so the trending and emerging skills could be identified.

Trending skills are defined as skills that had an increase of at least 50 ranks between 2014 and 2017 in internet job postings. Emerging skills are skills that were not previously in the top 200 most requested skills, but have since risen into the top 200 most requested skills list. Emerging skills must be within the top 150 most requested skills in 2017, or have risen in the rankings since they entered the top 200 in 2015 or 2016.

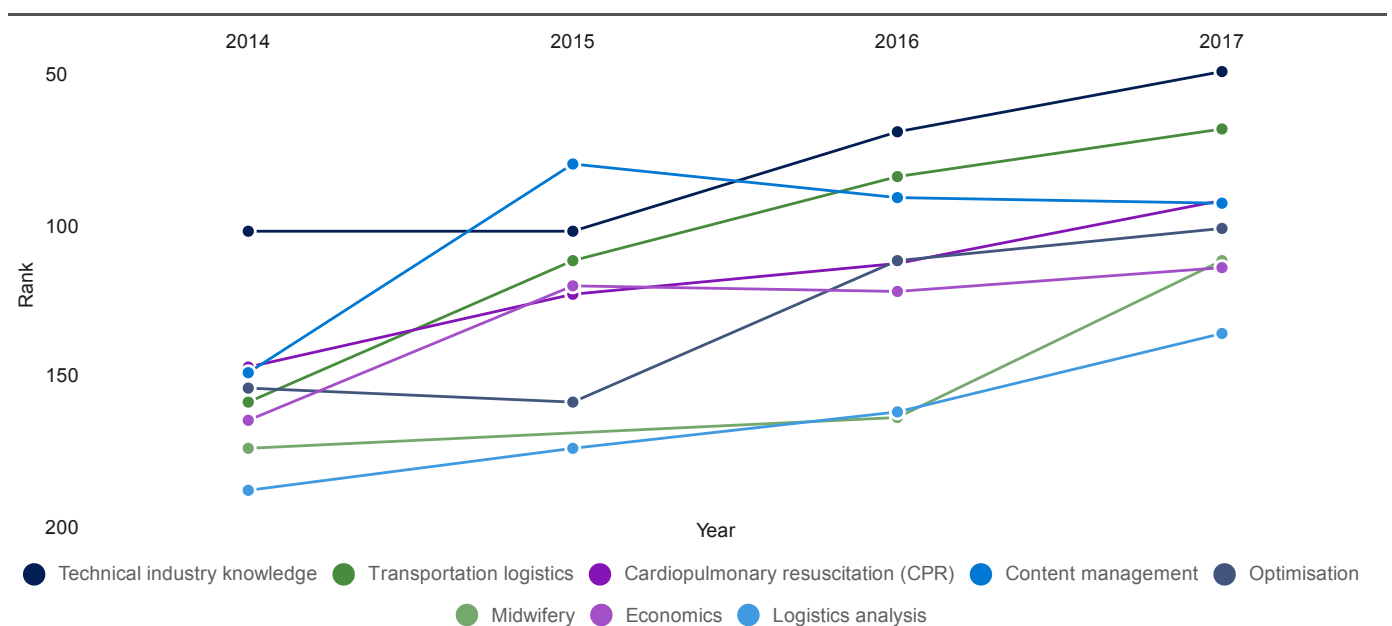
These trending and emerging skills are not necessarily new skills, but are an indication of what has been increasingly requested over the last four years. They may also indicate areas of employment in which there is an increasing number of internet job postings. The focus of this work is on specialised skills – that is, skills specific to an occupation.

The vocational education and training (VET) sector has an important role in developing many of these skills and preparing learners for the workforce. This work looks more closely at two occupations closely associated with VET and whether the relevant qualifications are providing the skills requested by employers in internet job postings.

What specialised skills are trending and emerging overall?

Trending skills across all internet job postings, 2014–17

Transportation logistics rose 91 ranks between 2014 and 2017 - the largest percentage increase among all trending skills (up 46%).

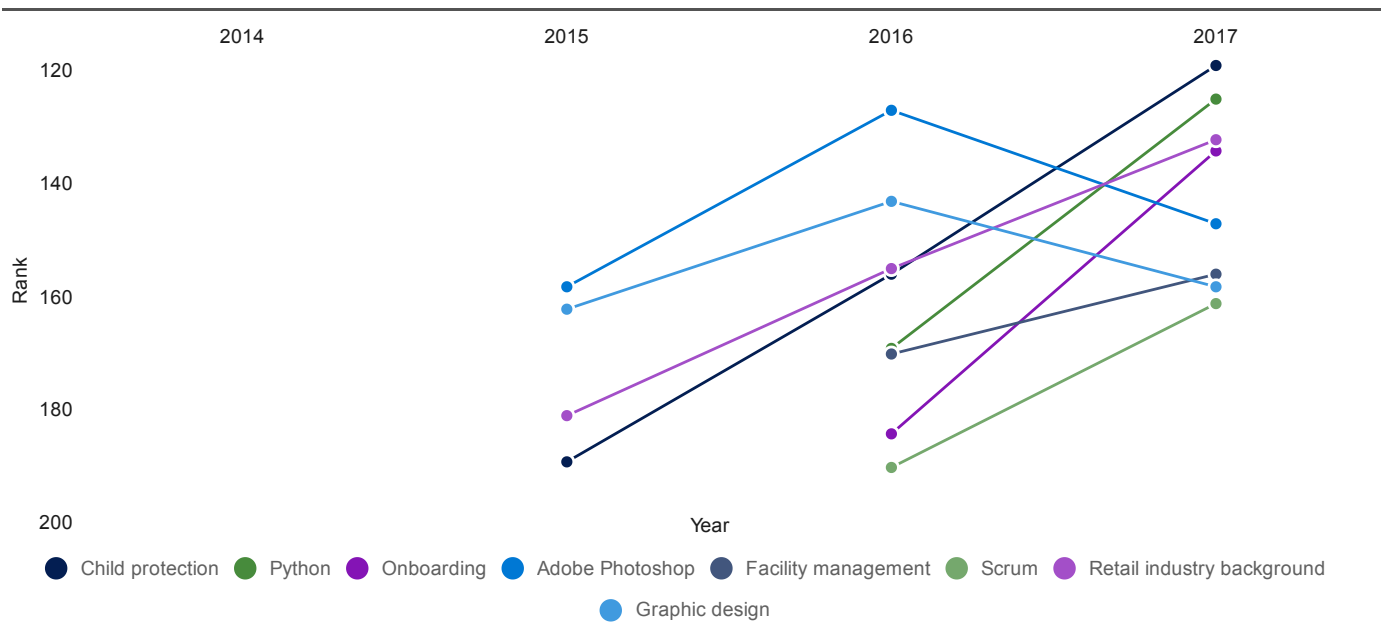


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The trend in transportation logistics across all internet job postings could likely be attributed to the increasing importance of automation in the transportation industry. More employers are therefore seeking applicants with transportation logistics experience or skills to prepare or advance their organisation in that aspect. Transportation logistics is also a trending skill in internet job postings for three different major occupation groups: Managers, Clerical and administrative workers, and Sales workers – this can be observed in the occupation section below.

Emerging skills across all internet job postings, 2014–17

Child protection emerged as a skill in 2015 and has since risen 70 ranks between 2015 and 2017 (up 35%).



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The emergence of child protection as a skill in internet job postings is in line with the increasing focus on that policy area, as seen in initiatives such as the implementation of the Third Action Plan: 2015-2018 of the [National Framework for protecting Australia's children 2009-2020](#). This coincides with the increasing rates of children receiving child protection services over the last 5 years – refer to page 16 of the [Child protection Australia 2016-17 report](#) by the Australian Institute of Health and Welfare. There has also been an increase in policy and media attention in light of the [Royal Commission into Institutional Responses to Child Sexual Abuse](#).

Onboarding is the process of integrating new employees into an organisation or familiarising a new customer/client with one's products or services. Some examples of internet job postings that require onboarding as a skill include Human resource administrator, Onboarding coordinator, Office manager, and IT desktop support. The emergence of onboarding can also be observed in postings for Managers and Sales workers major occupation groups, as well as the Construction and Rental, hiring and real estate services industries.

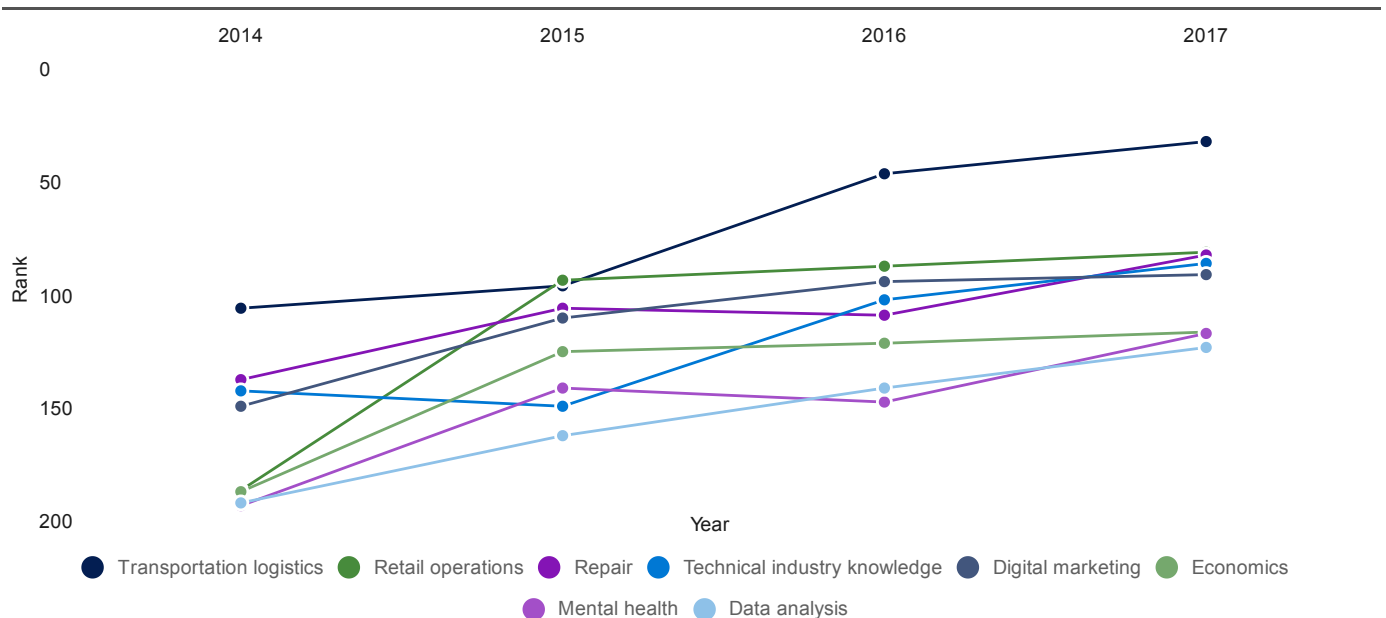
Python is a programming language that emerged in 2015 across all internet job postings and particularly postings for jobs in the Financial and insurance services industry. Python is also a highly sought after skill in internet job postings for Professionals which has been trending since 2014, with an increase of 75 rankings (38%) from 2014 to 2017 (see trending skills chart in Occupation section below). Some examples of internet job postings requesting Python are Data scientist, Software test engineer, Network consulting engineer and Automation developer.

What specialised skills are trending and emerging by occupation?

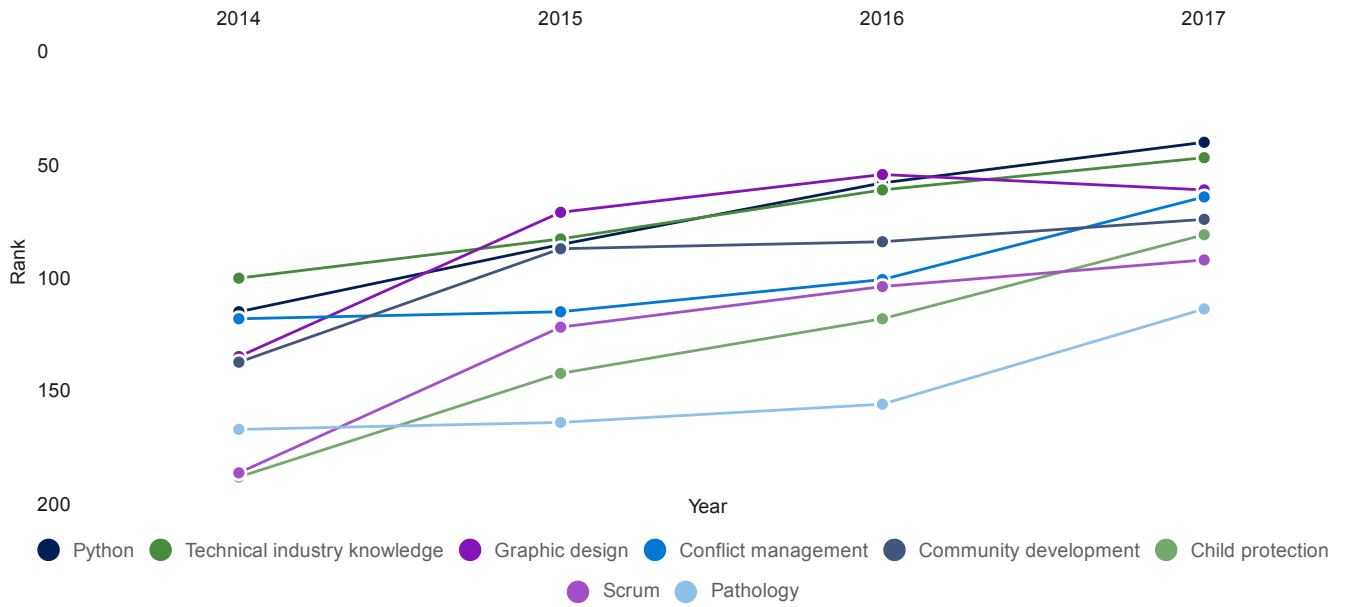
This section provides information on the trending and emerging skills requested in internet job postings by occupation (ANZSCO Major Group). Note that the ranking of skills is within each occupation and not across all internet job postings.

Trending skills in internet job postings by occupation, 2014–17

Managers

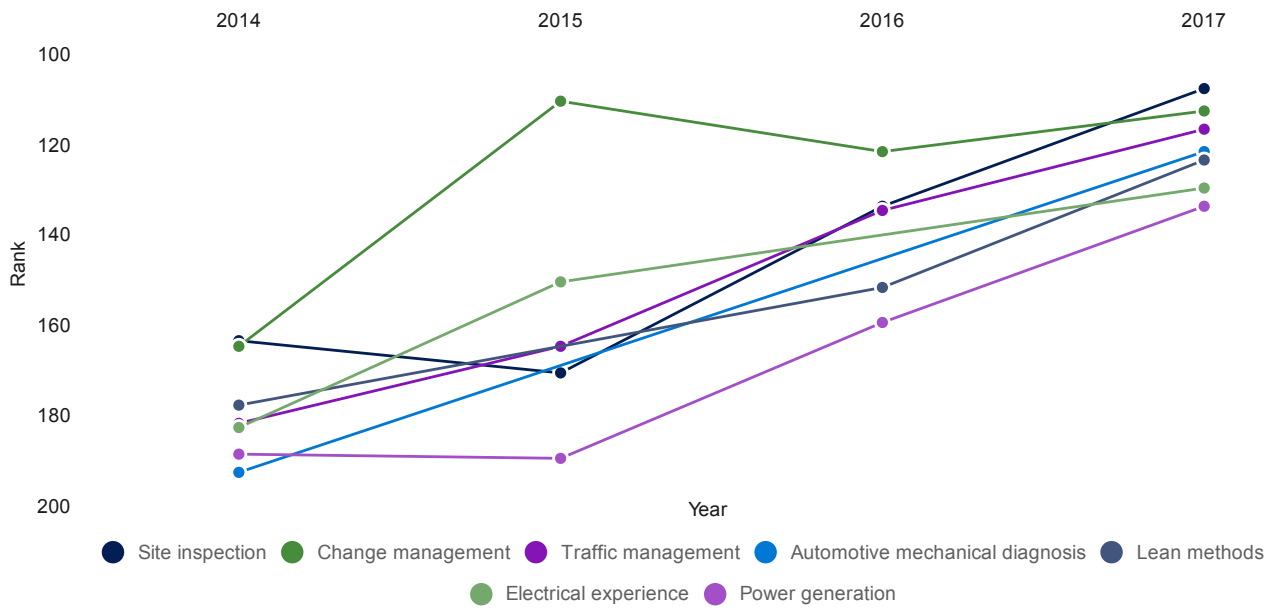


Professionals

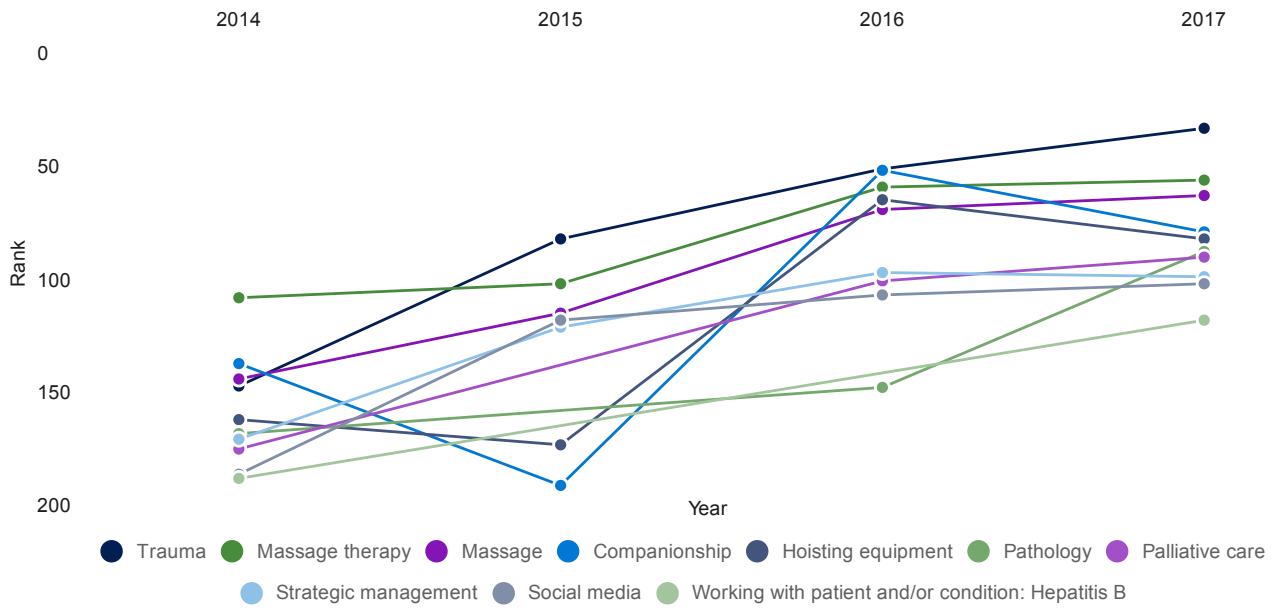


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Technicians and trades workers

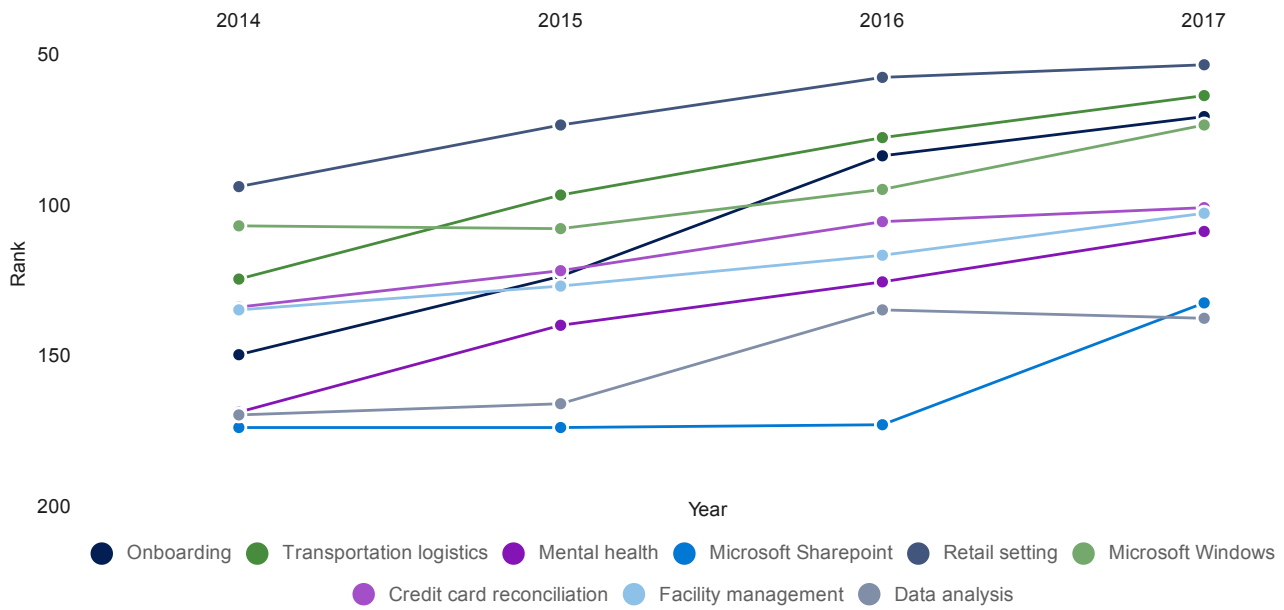


Community and personal service workers

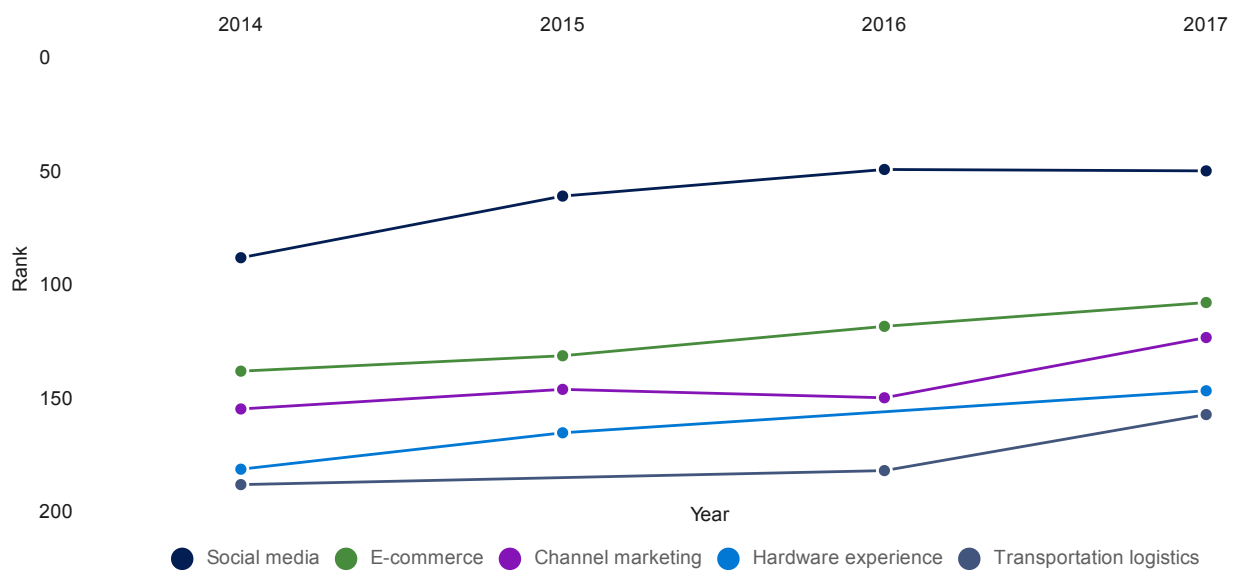


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Clerical and administrative workers

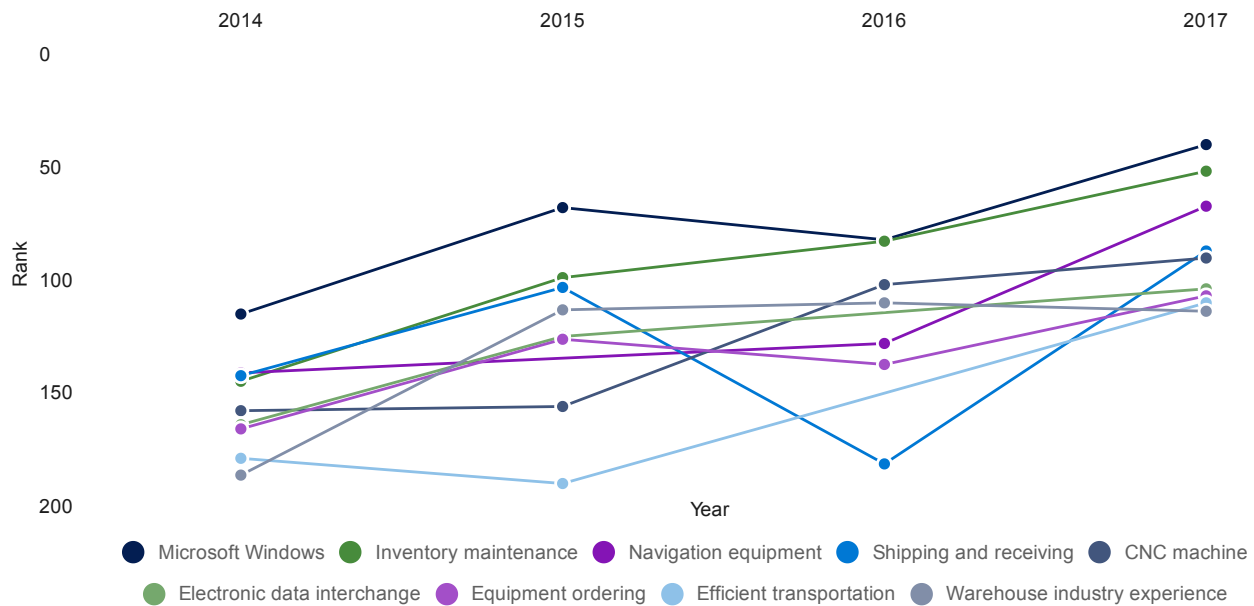


Sales workers

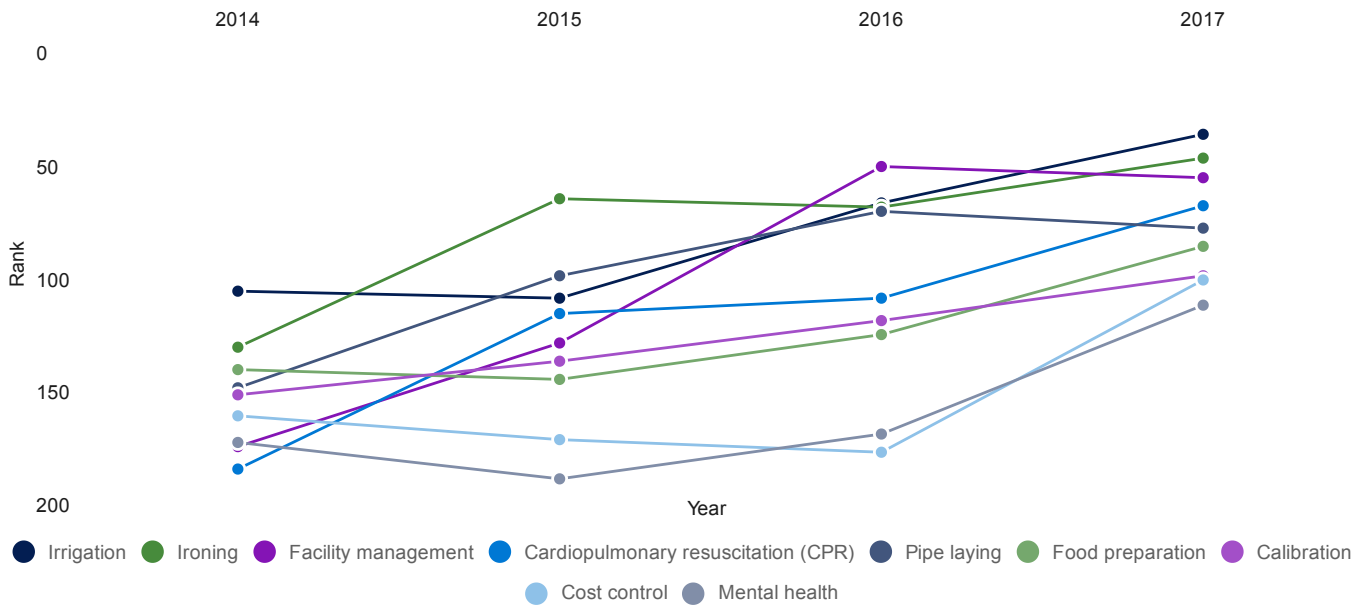


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Machinery operators and drivers



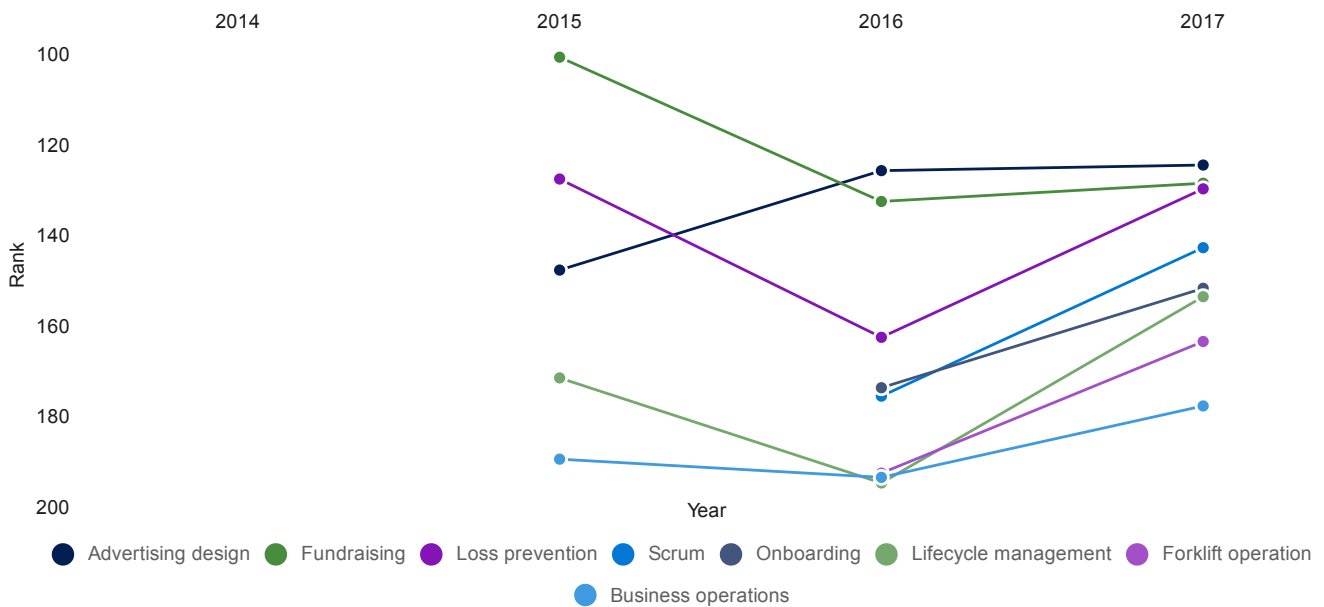
Labourers



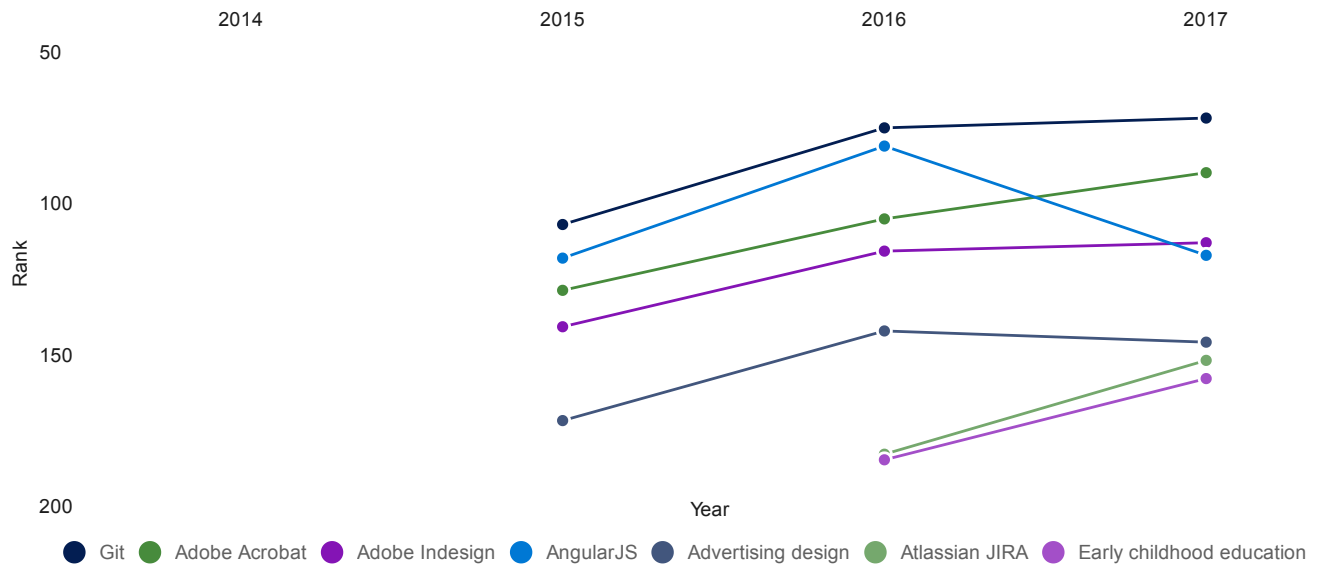
Note: No skills were identified to be trending for Sales workers (according to the definition of trending skills), therefore, skills with at least an increase of 30 rankings between 2014 to 2017 were identified as trending skills for this occupation group.

Emerging skills in internet job postings by occupation, 2014–17

Managers

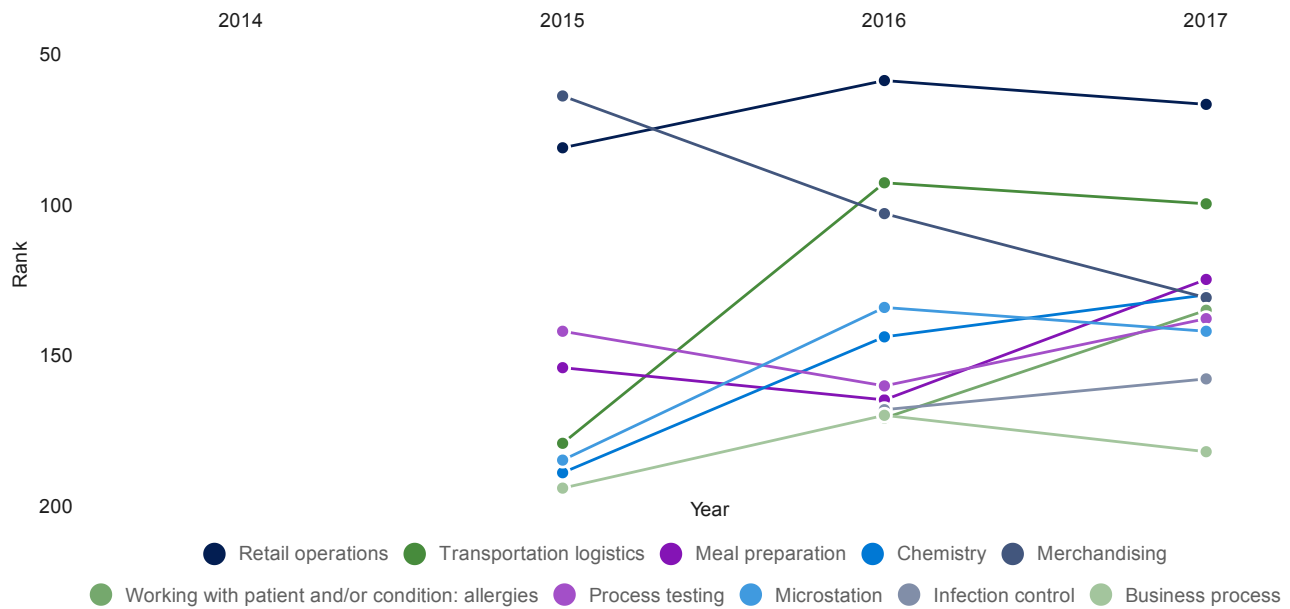


Professionals

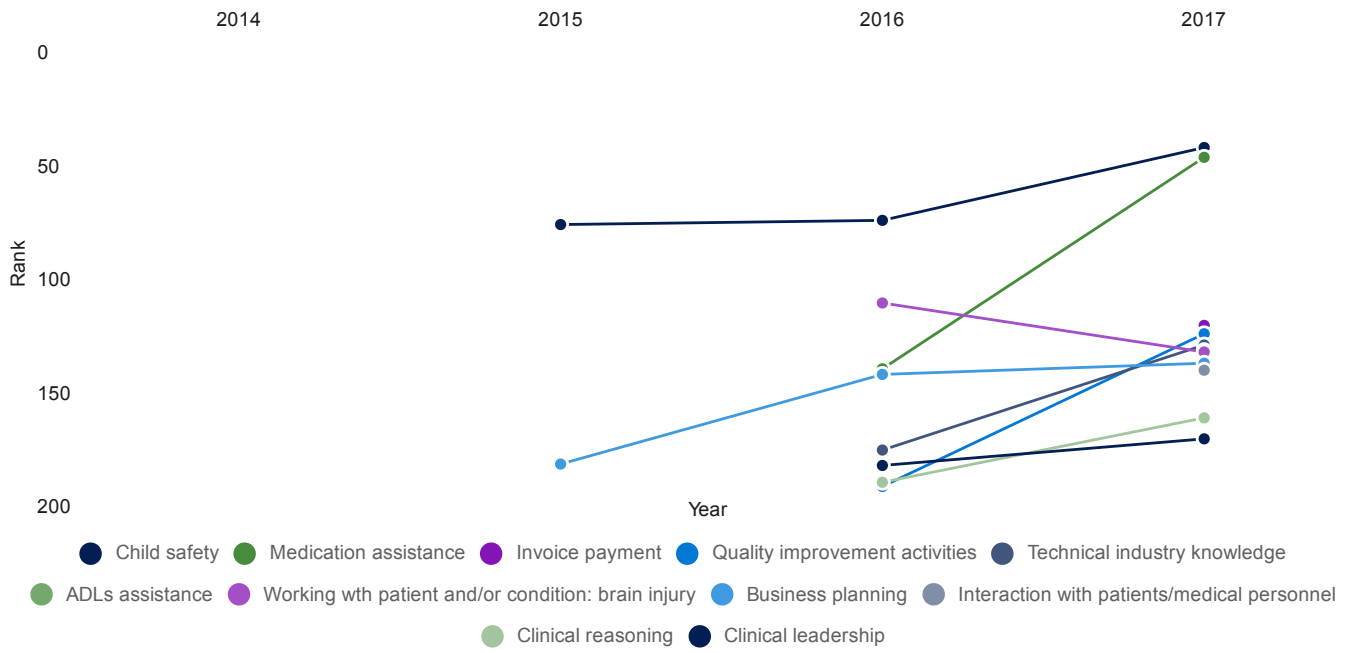


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Technicians and trades workers

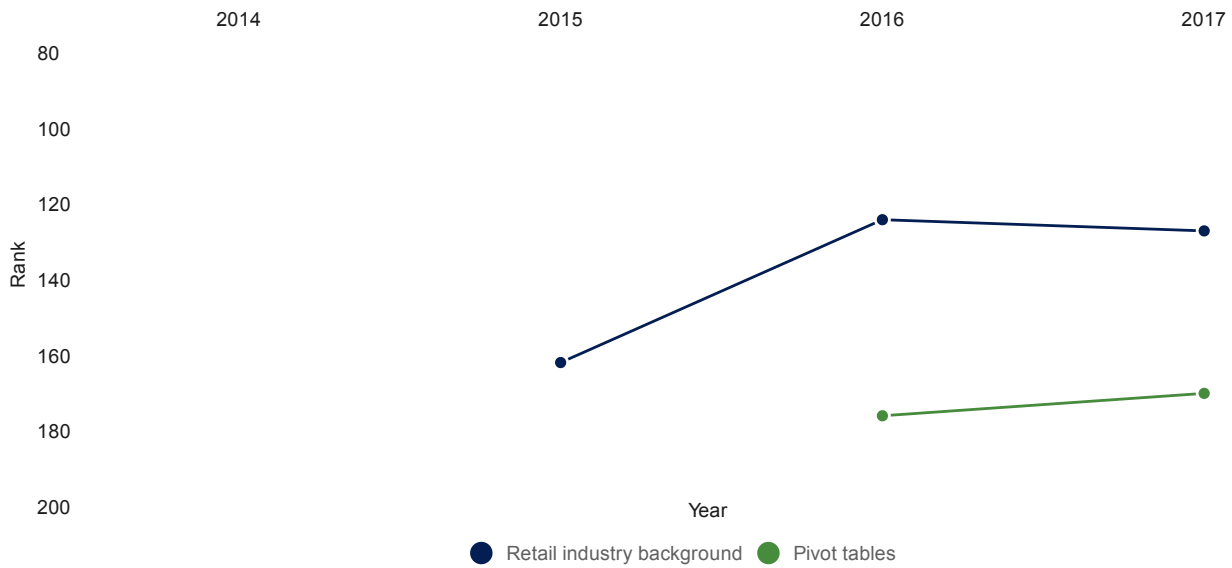


Community and personal service workers

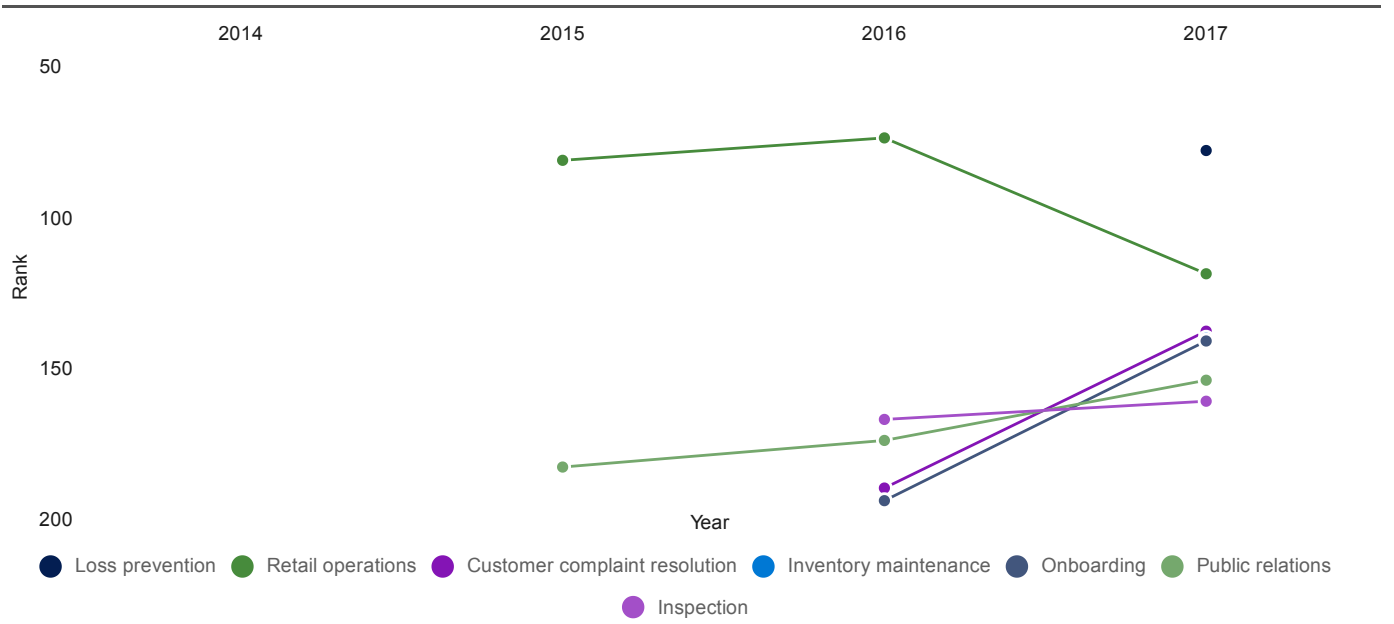


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Clerical and administrative workers

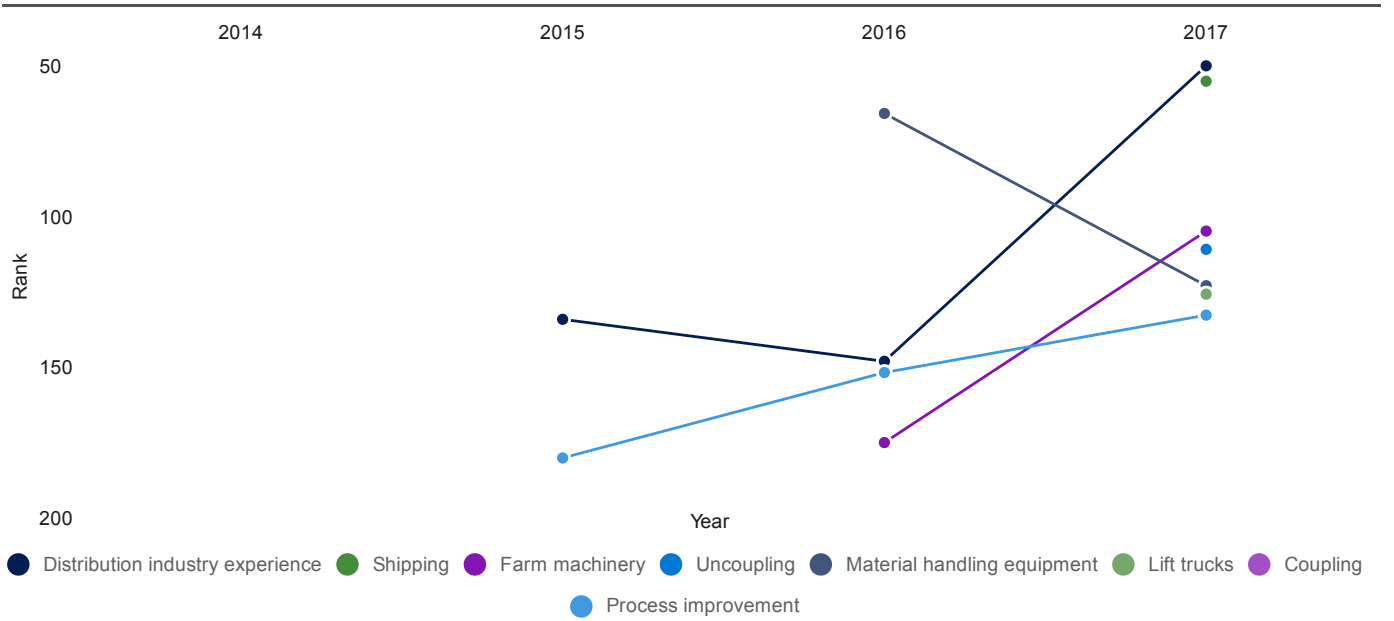


Sales workers

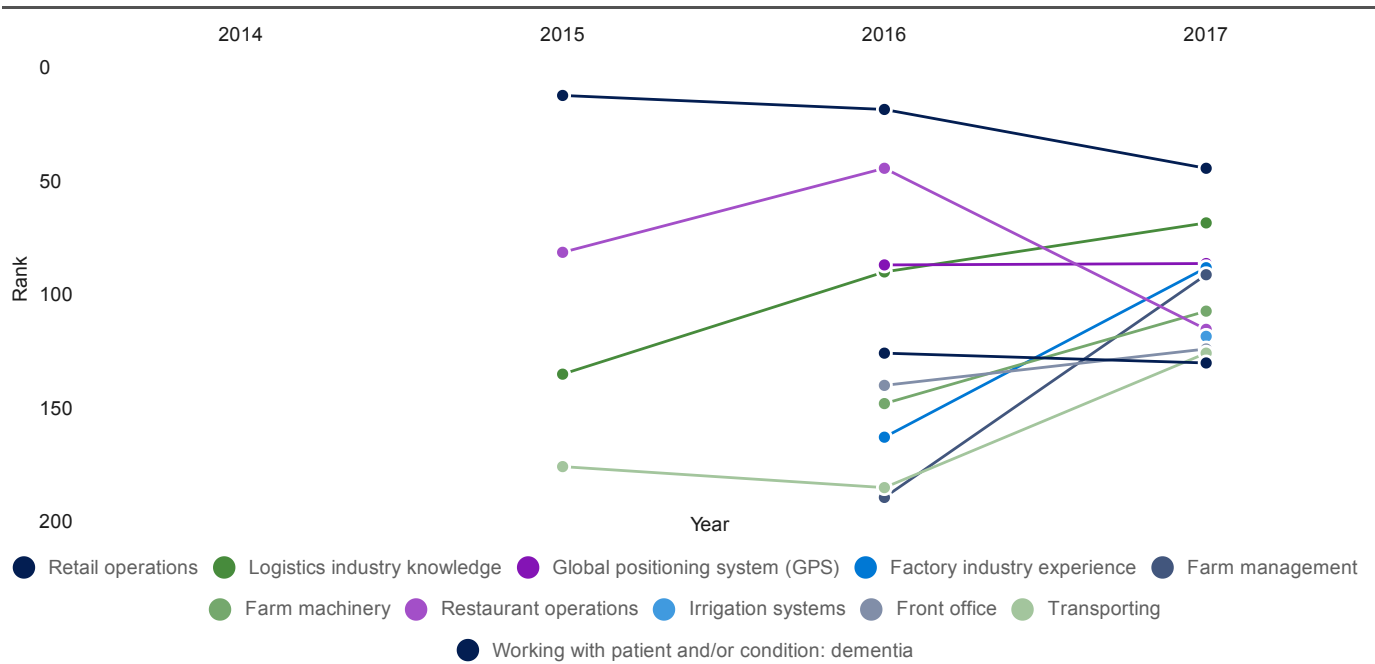


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Machinery operators and drivers



Labourers



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Mental health has been a trending skill in internet job postings for Managers, Clerical and administrative workers, and labourers. Mental health as a trending or emerging skill in internet job postings does not imply that employers are seeking applicants with good mental health, but are instead looking for those with a demonstrated high level knowledge of relevant accredited frameworks such as the [National Standards for Mental Health Services](#), or have experience dealing with patients with mental health issues. Some examples of jobs requesting mental health are District medical officers, Clinical director, Drug health program officer and Care workers.

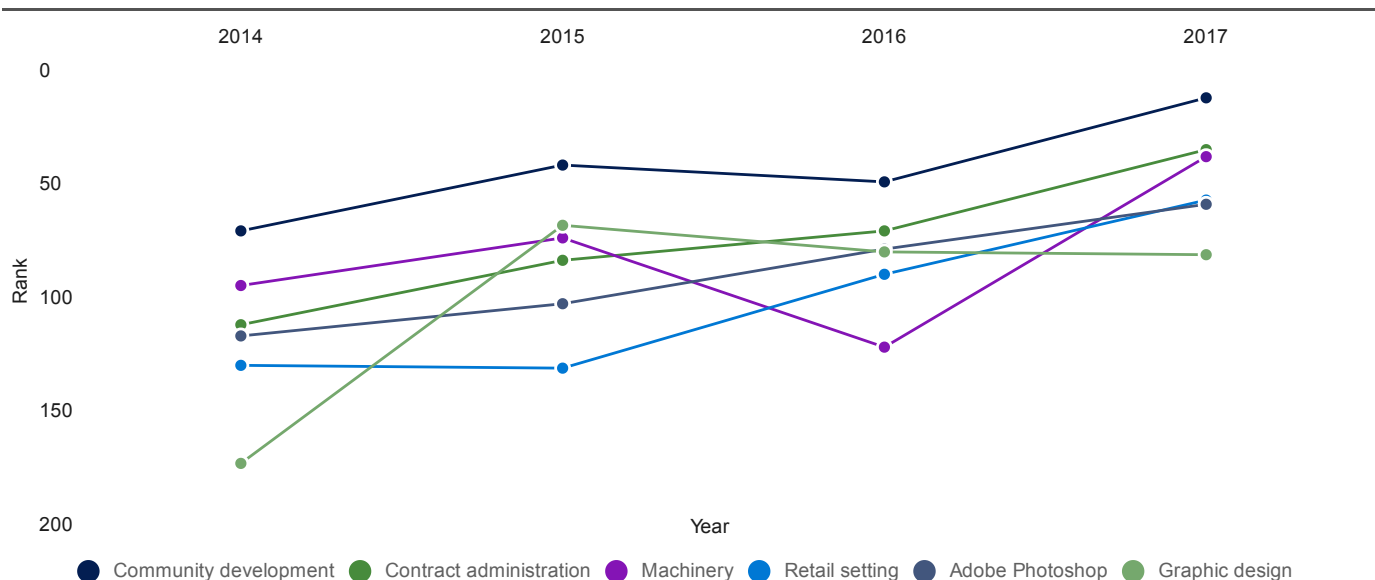
Git is an emerging skill in internet job postings for Professionals and is within the top 100 most requested in 2017. Git is a free and open source distributed version control system – a tool to manage source code history. Some examples of internet job positions requesting Git are Front end developer, Full stack Java developer, Data science engineer and Senior iOS/Android developer.

What specialised skills are trending and emerging by industry?

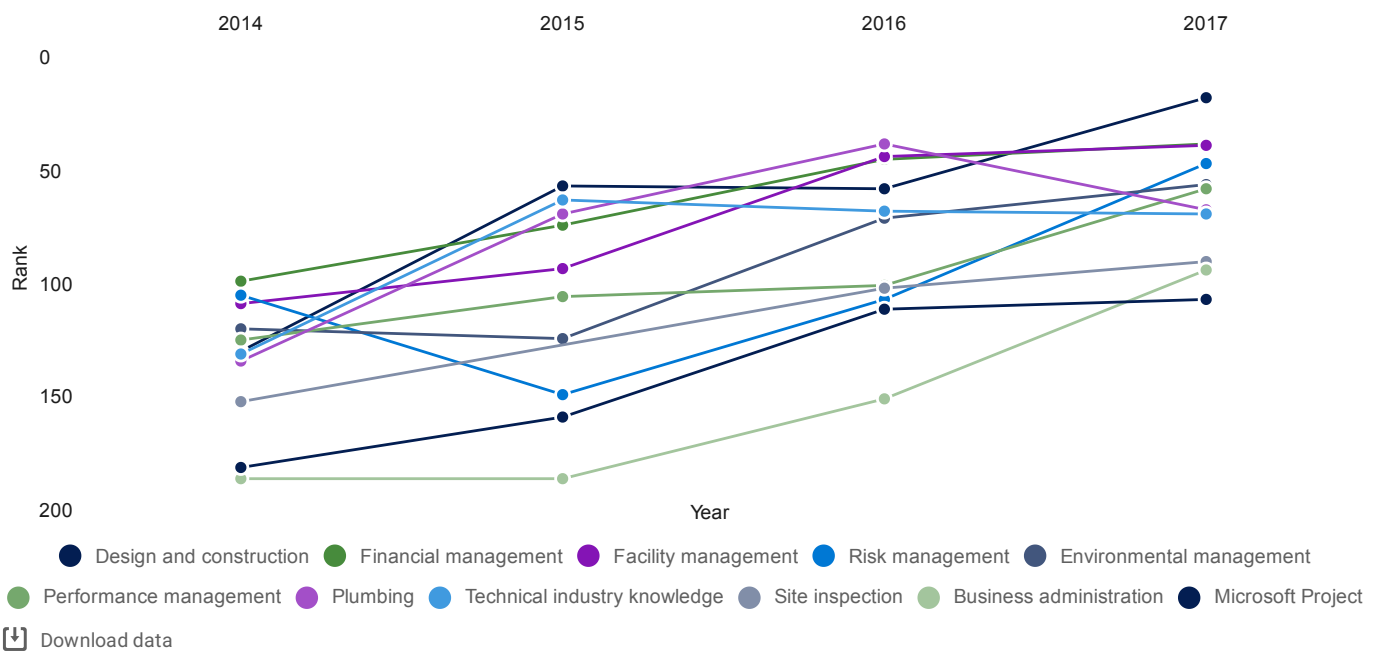
This section provides information on the trending and emerging skills in selected industries (ANZSIC divisional level) as listed in internet job postings. Note that ranking of skills is within each industry and not across all internet job postings. The chosen industries are the top 10 industries with the highest percentage of employers with vocational qualifications as a job requirement according to the Survey of Employer's Use and Views of the VET System (NCVER 2017).

Trending skills in internet job postings by selected industries, 2014–17

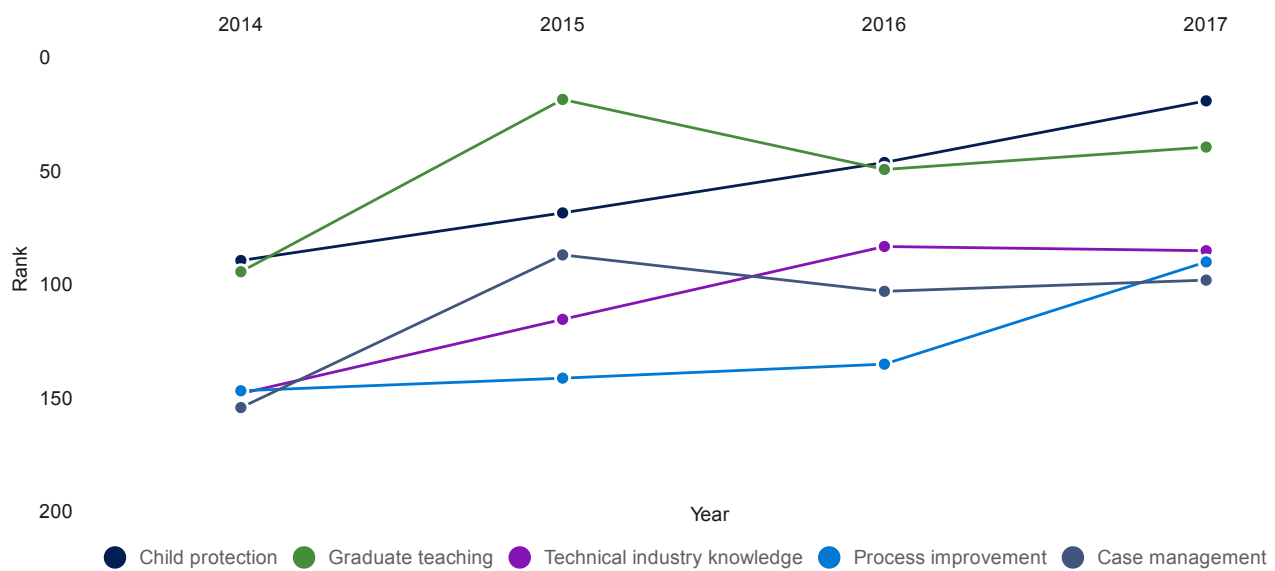
Arts and recreation services



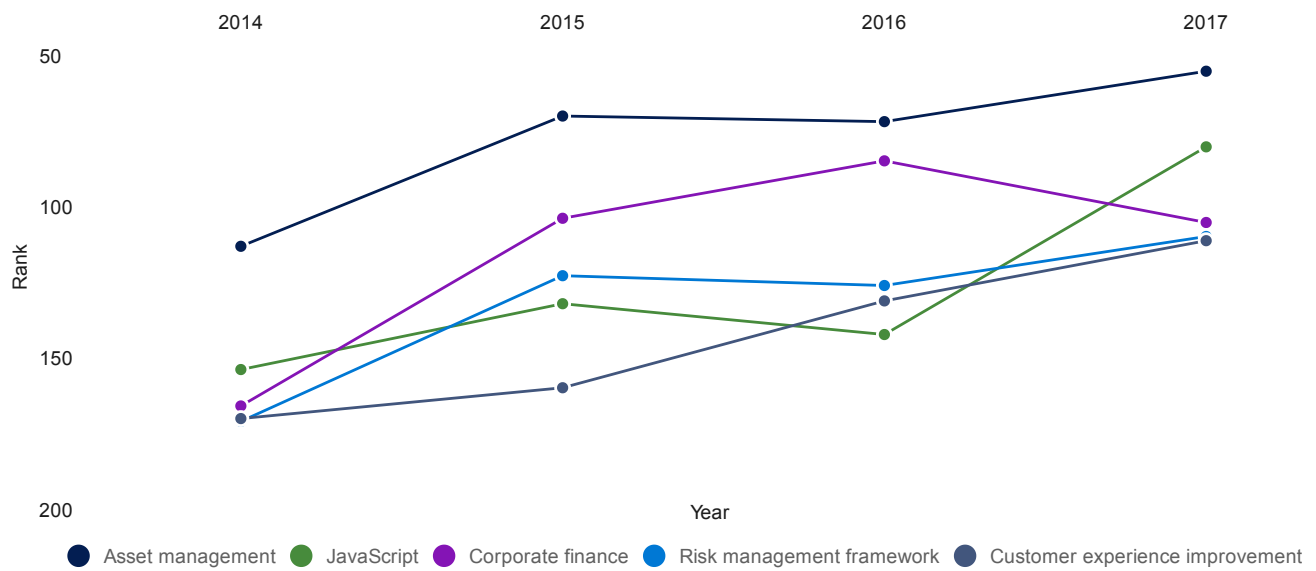
Construction



Education and training

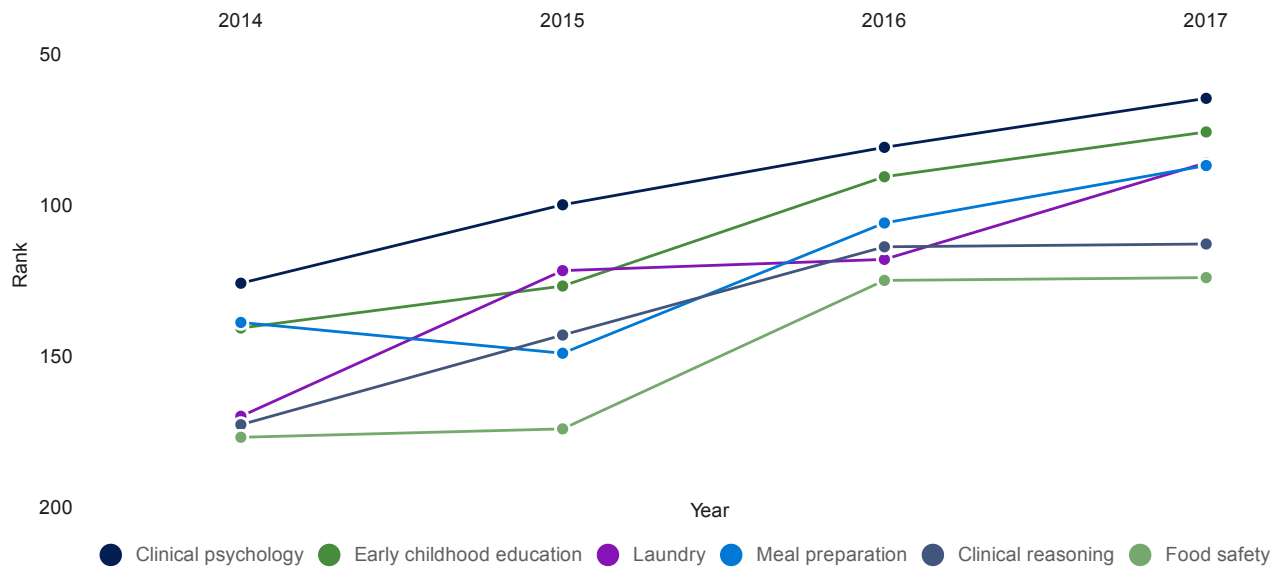


Financial and insurance services



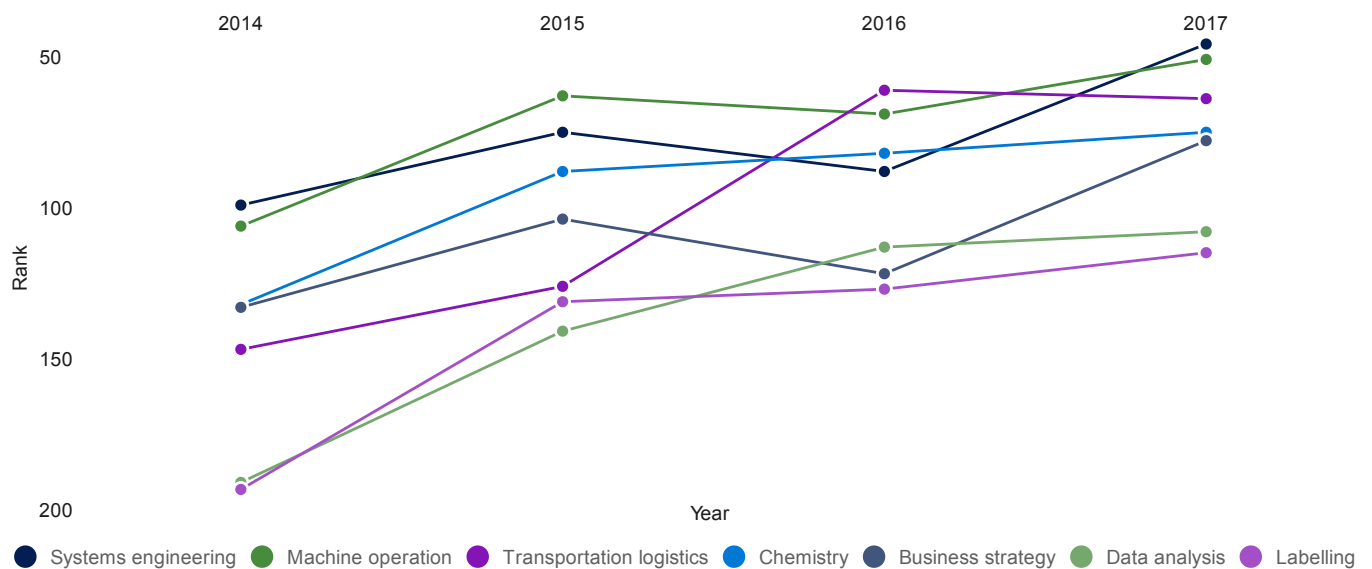
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Health care and social assistance

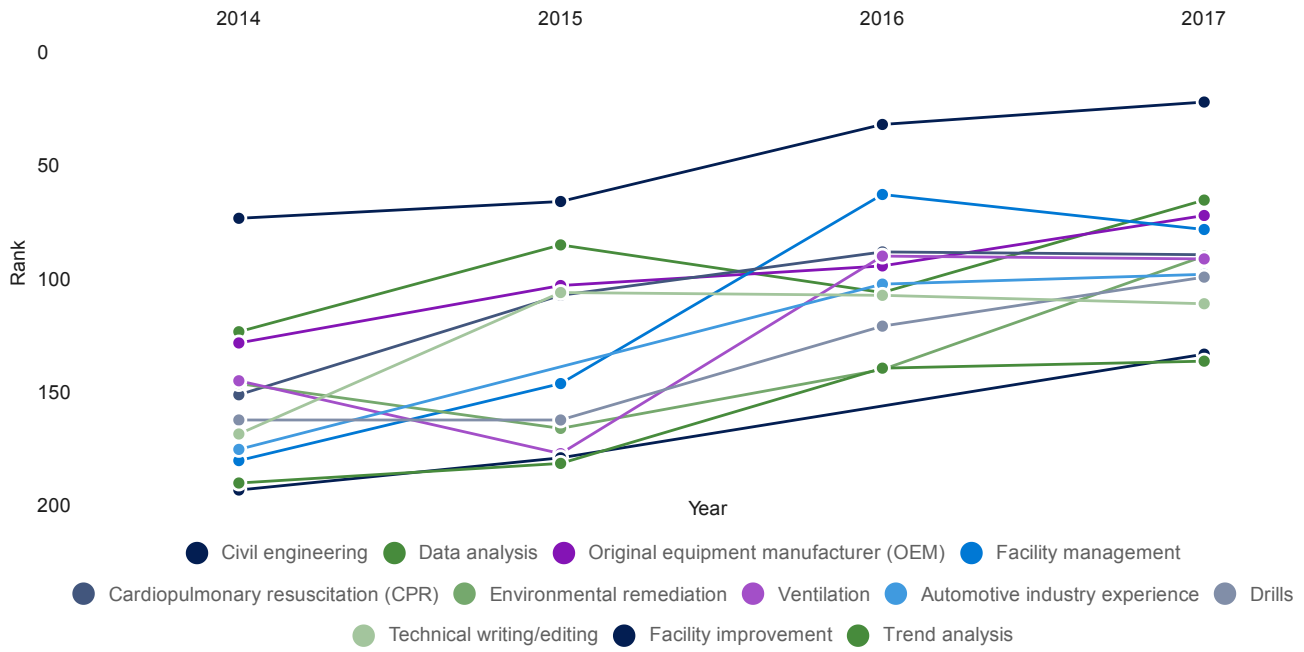


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Manufacturing

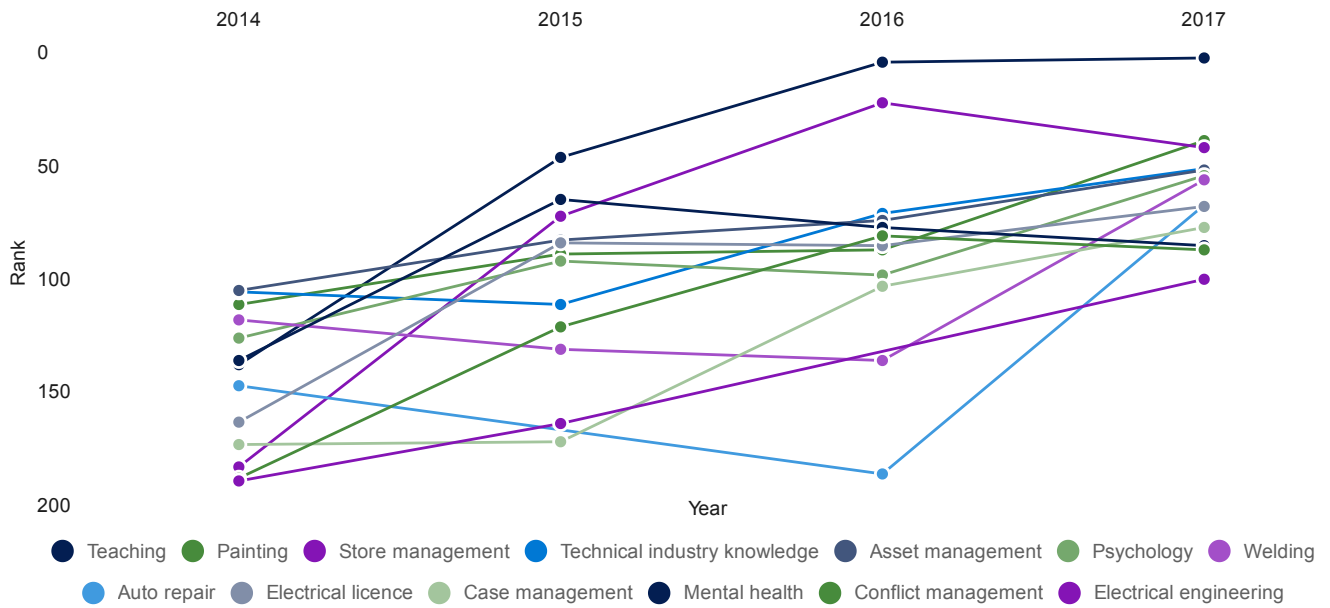


Mining

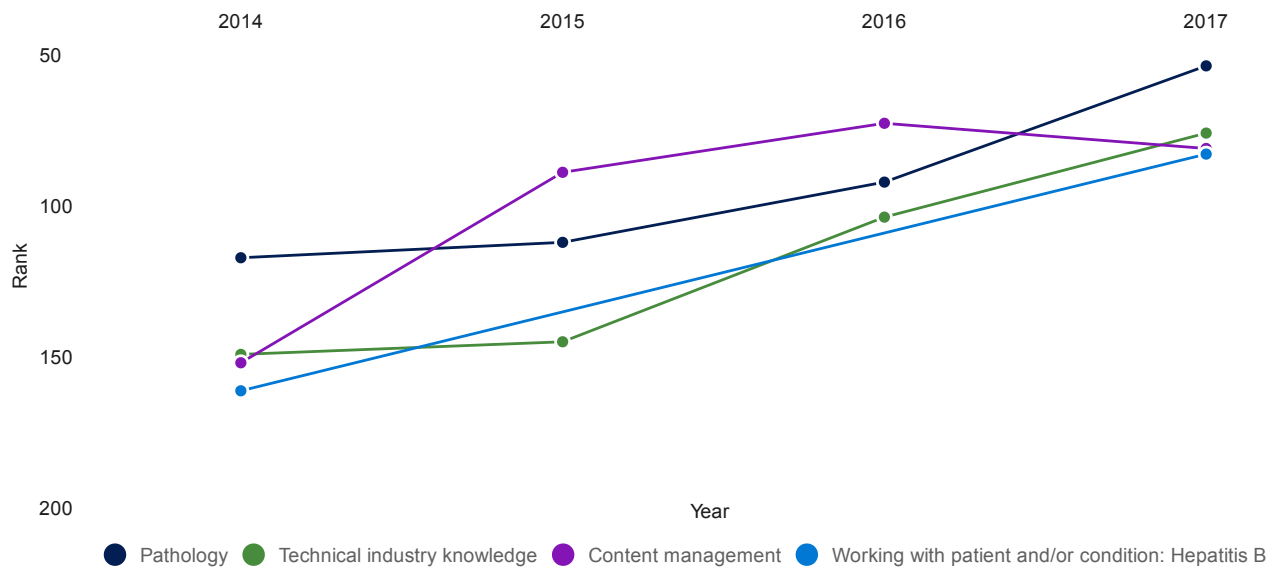


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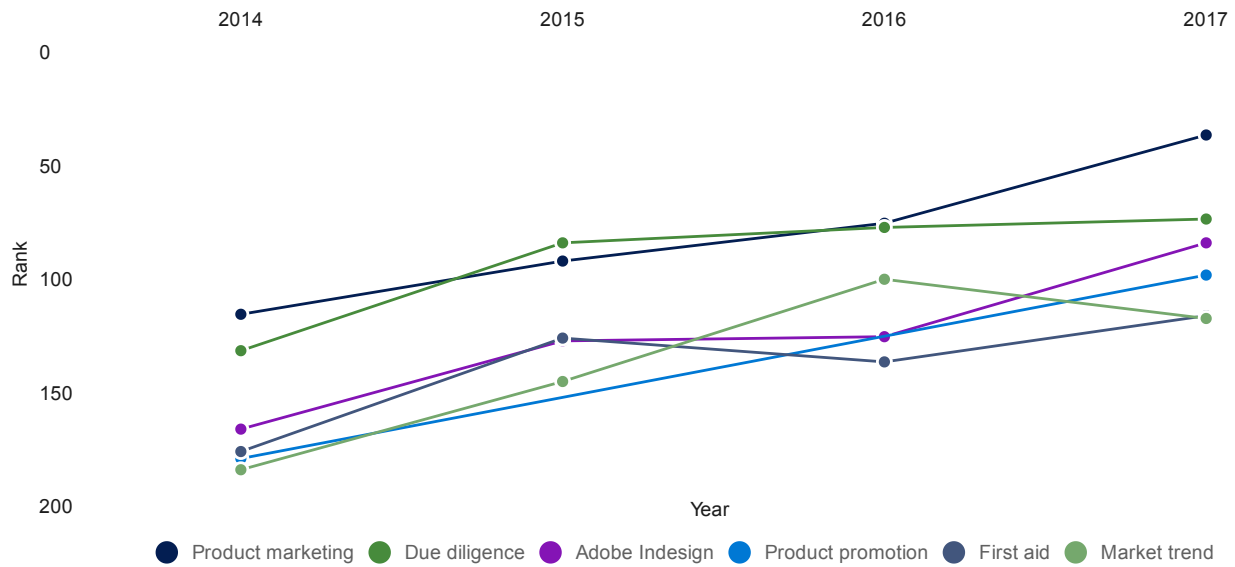
Other services



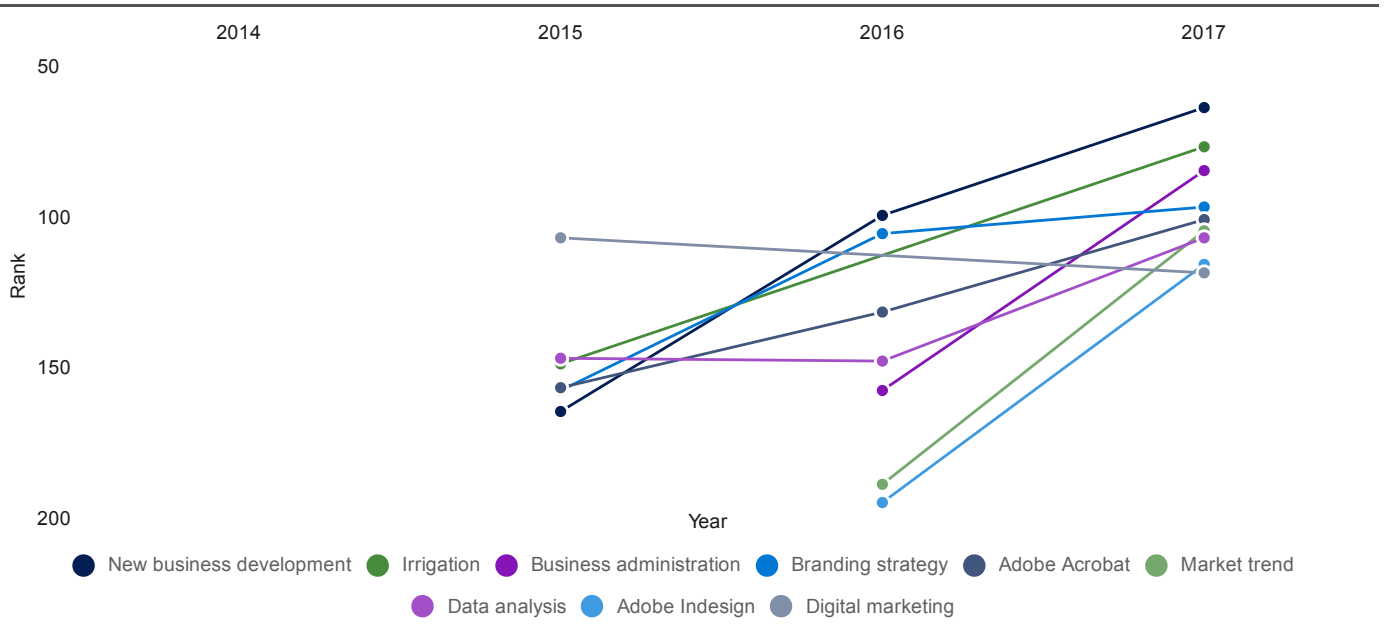
Public administration and safety



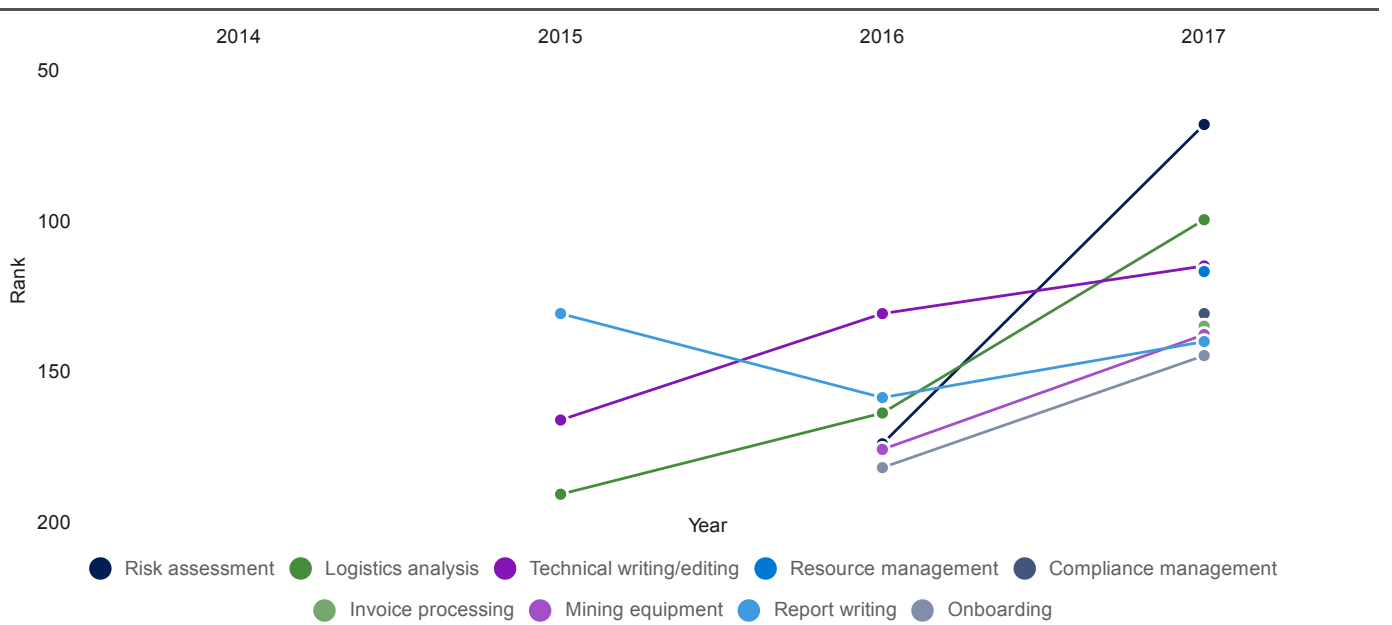
Rental, hiring and real estate services



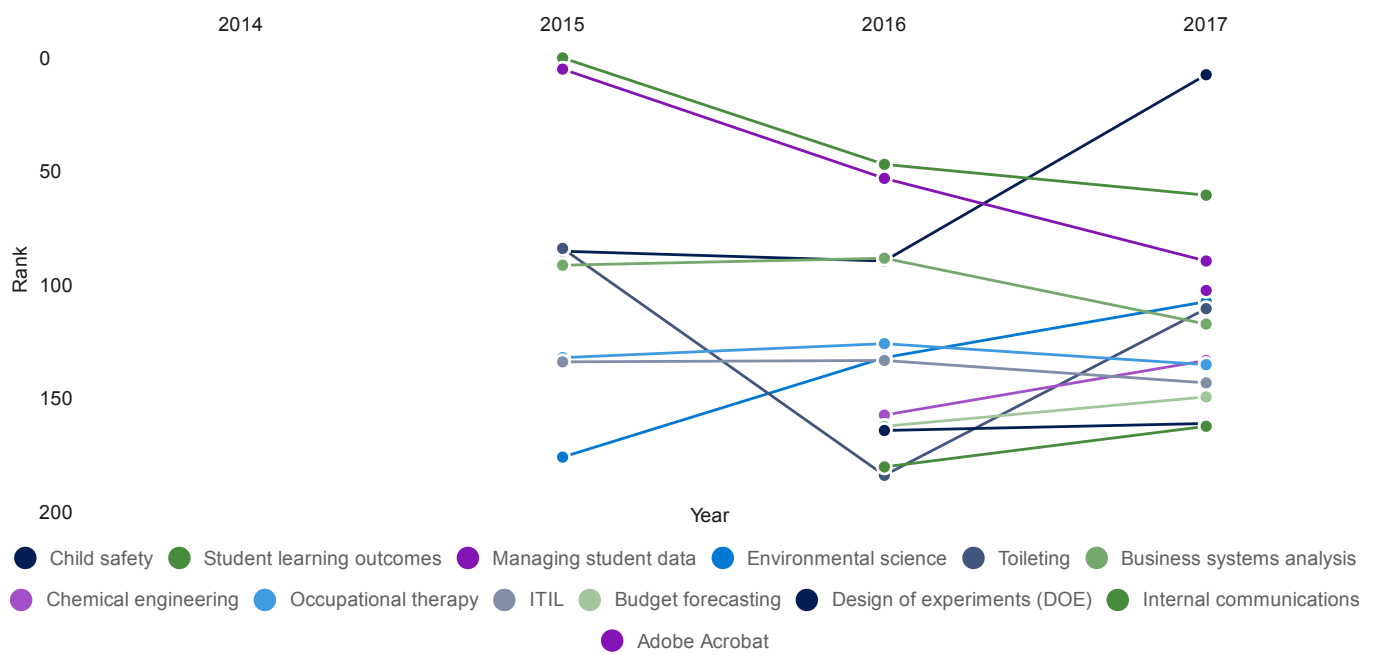
Arts and recreation services



Construction

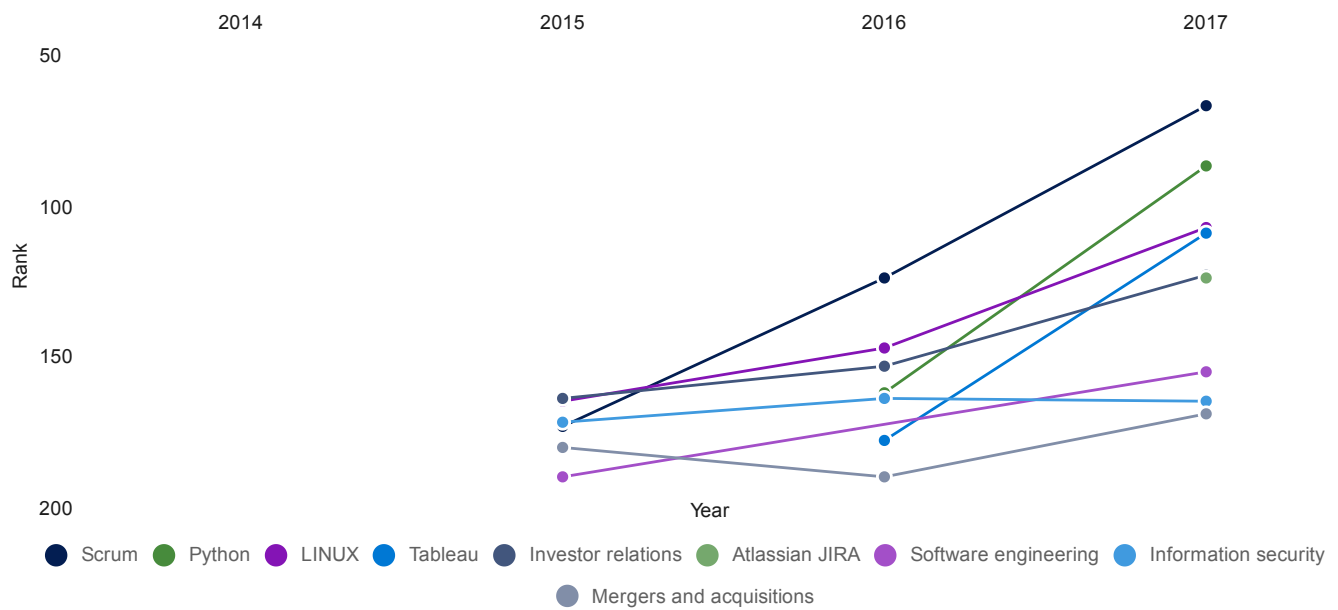


Education and training

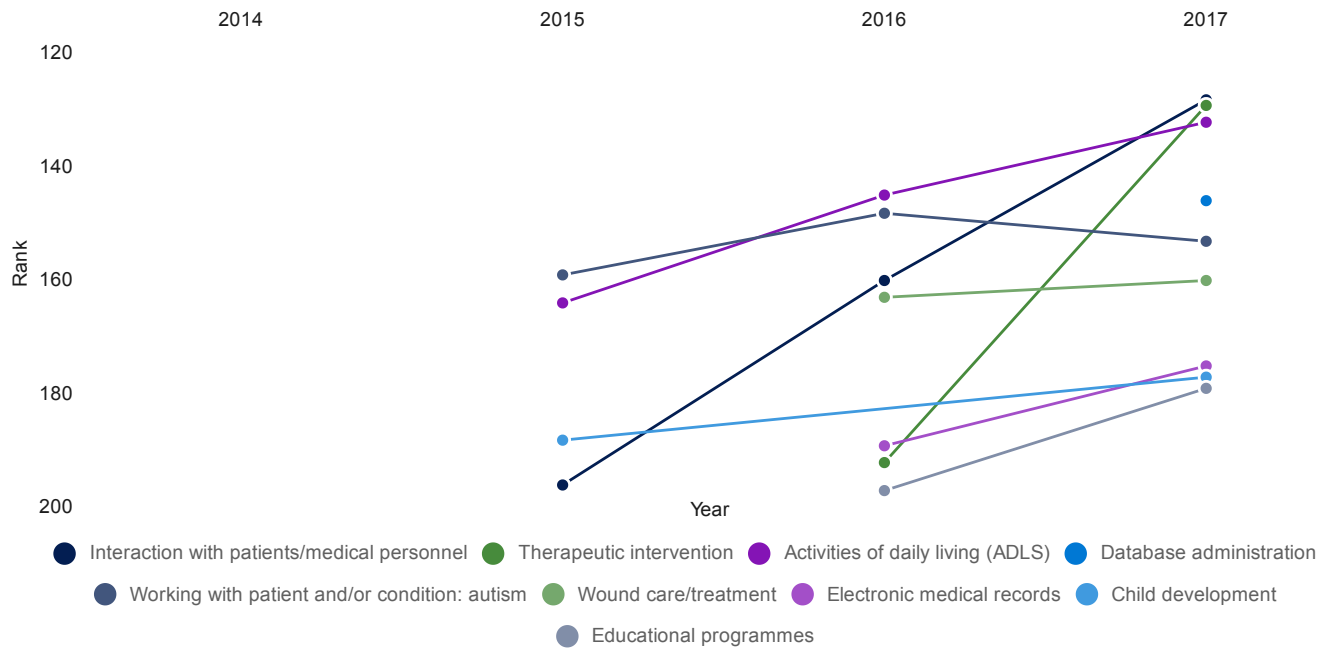


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Financial and insurance services

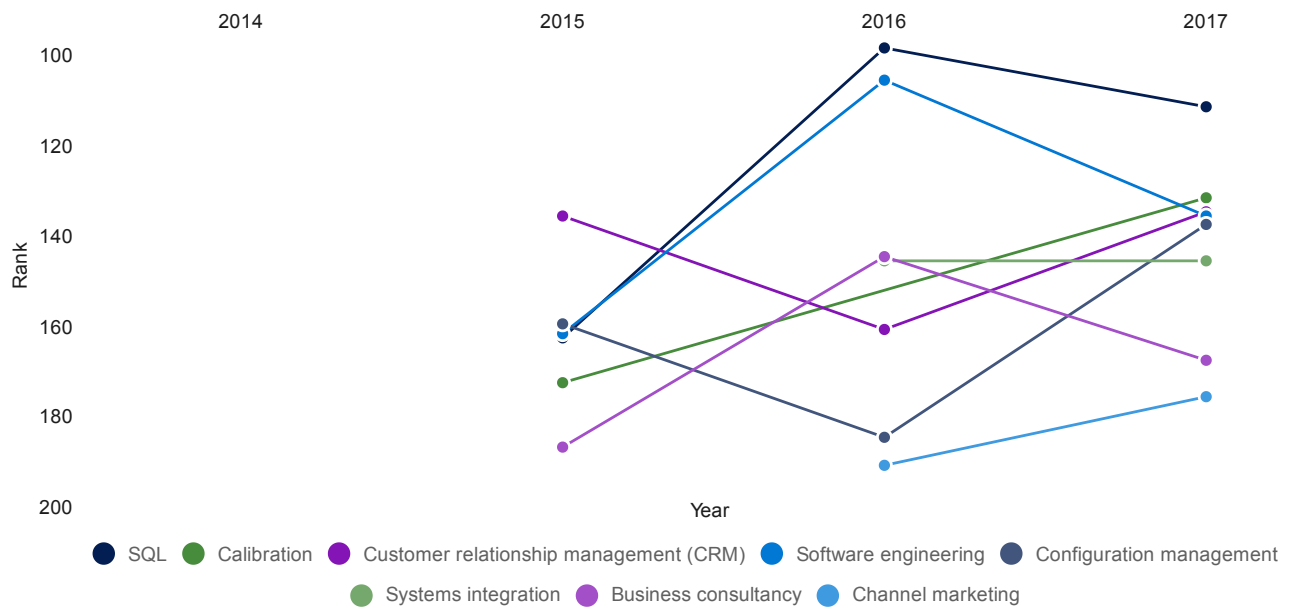


Health care and social assistance

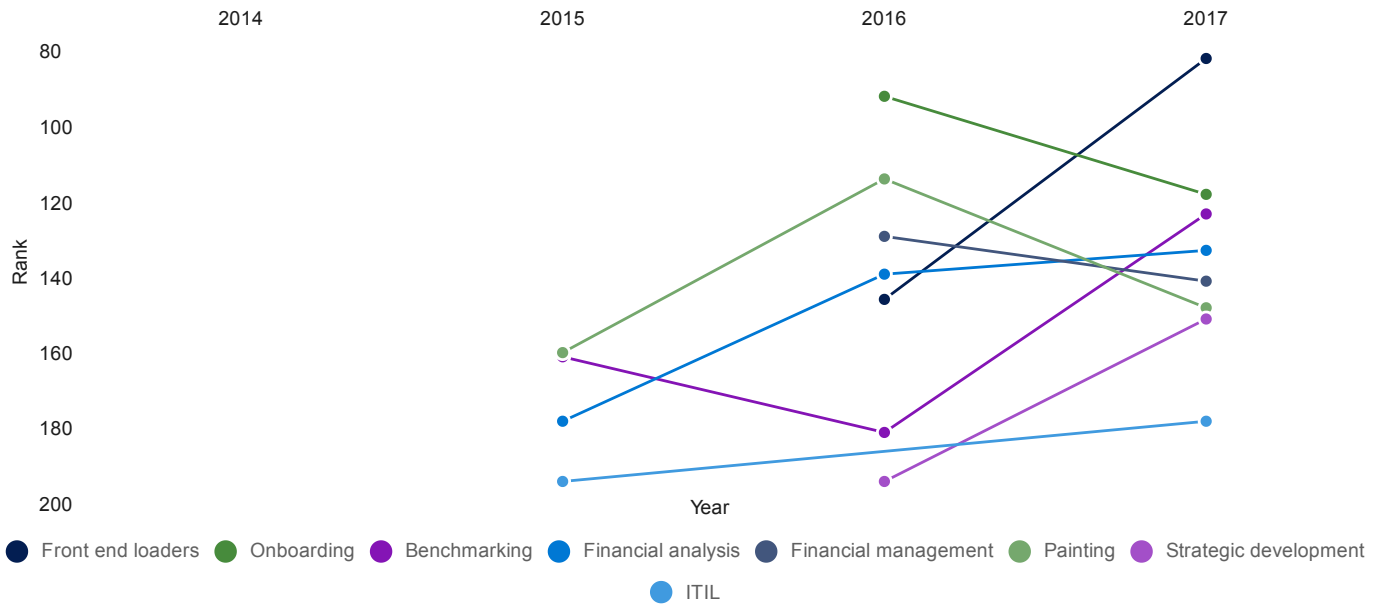


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Manufacturing

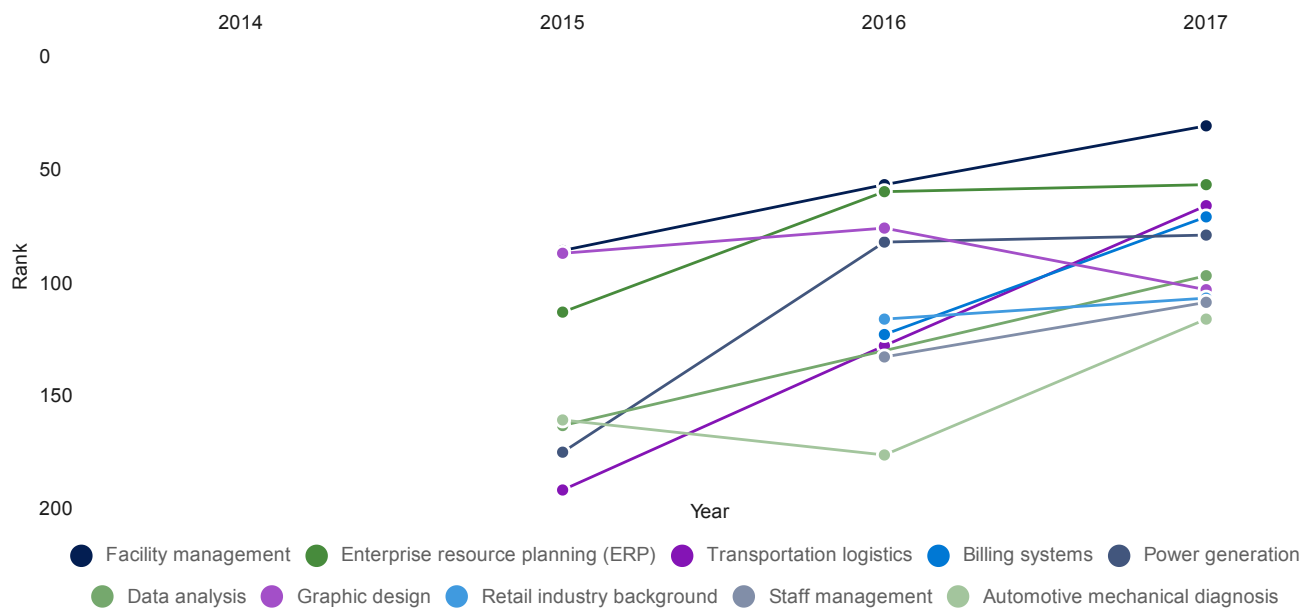


Mining

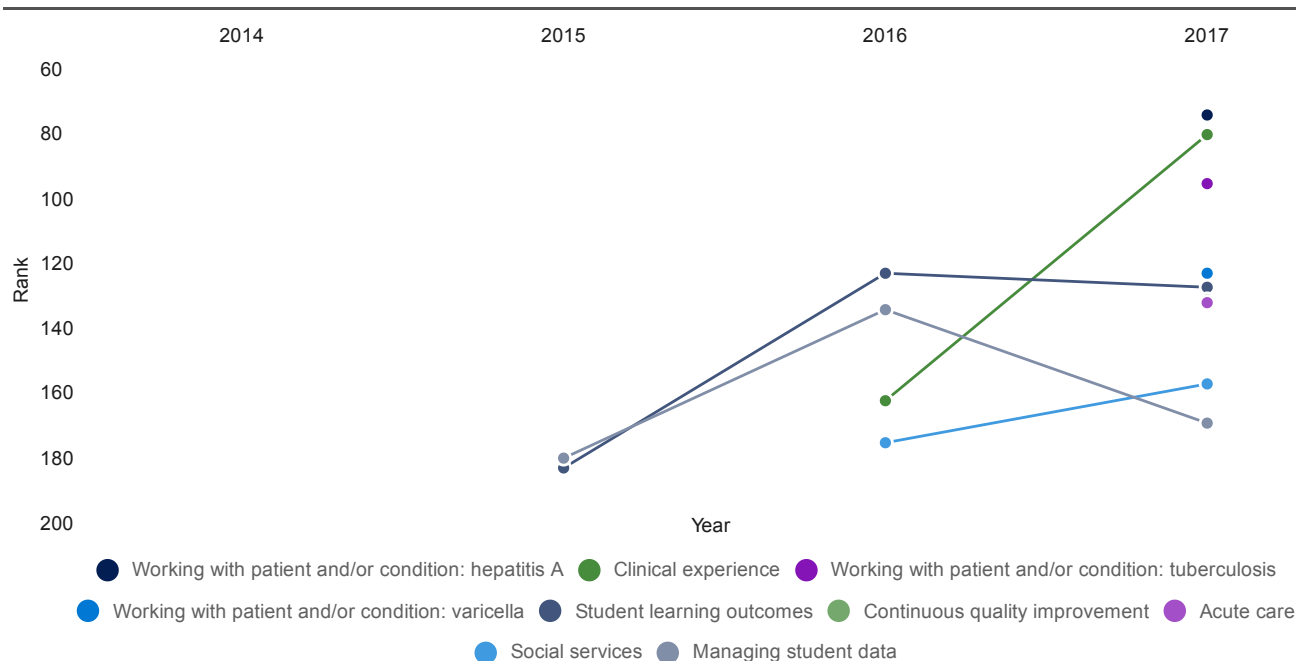


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Other services

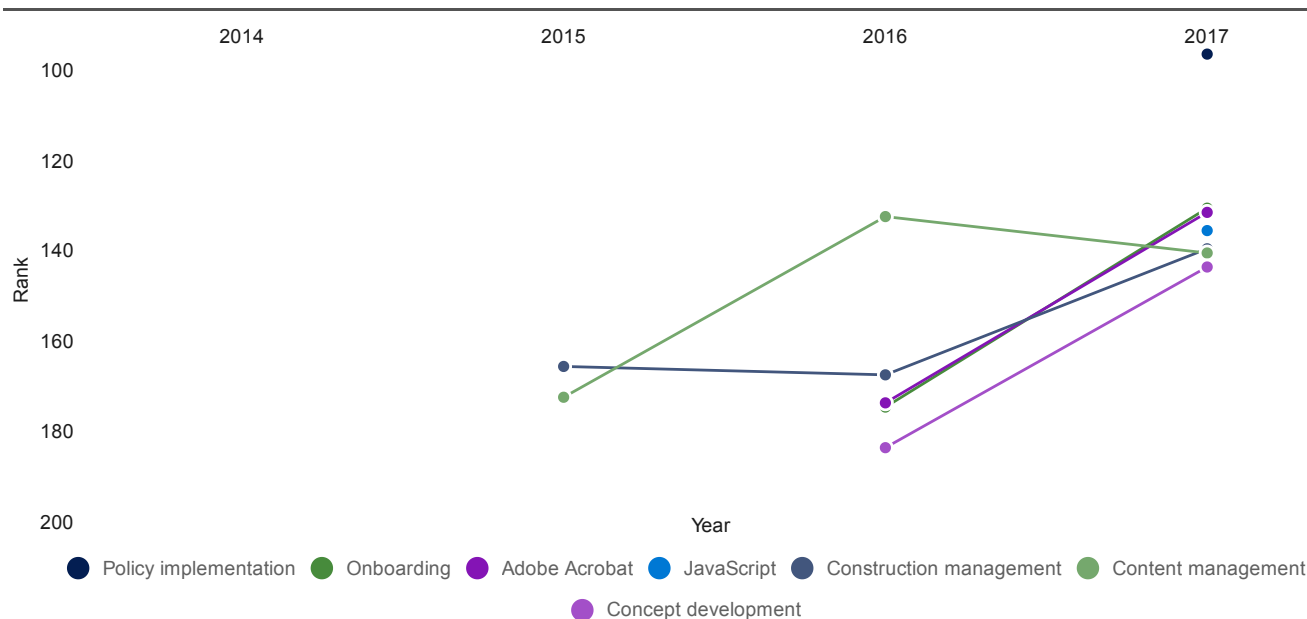


Public administration and safety



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Rental, hiring and real estate services



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'Information technology infrastructure library (ITIL)' is an emerging skill in internet job postings for both the Education and training, and Mining industries. ITIL is a set of detailed practices for IT service management focusing on aligning IT services with the needs of the business. Examples of internet job postings requesting ITIL are Business architect, IT service desk analyst, IT project manager, Enterprise product support specialist and Lead business analyst.

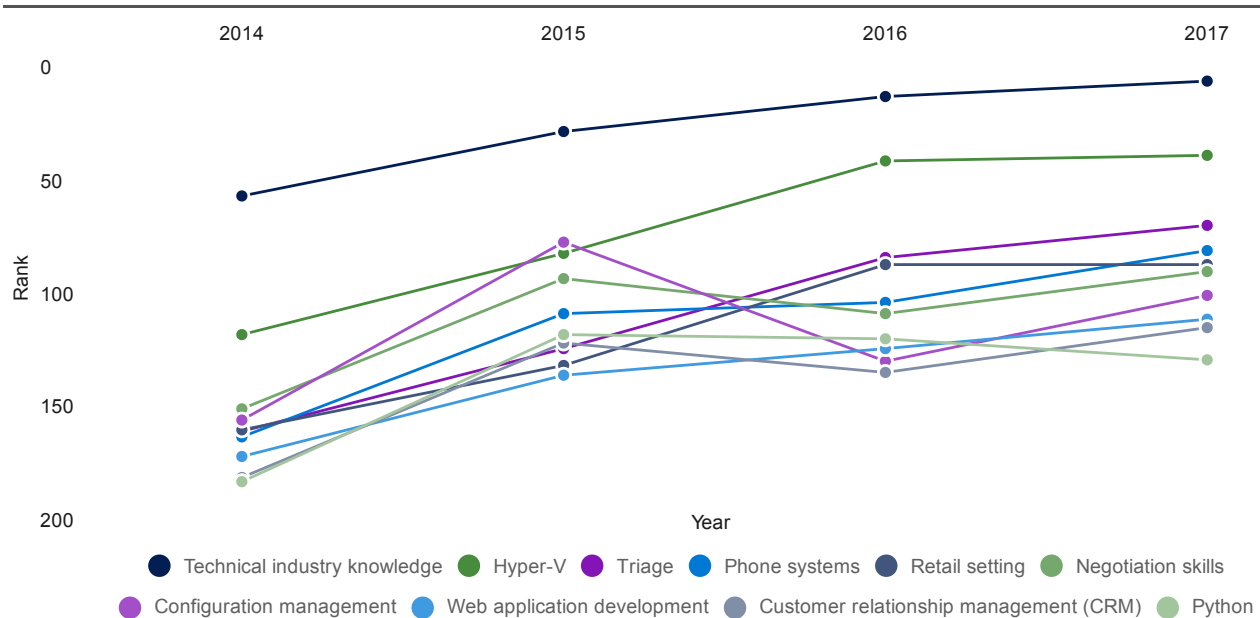
'Student learning outcomes' is an emerging skill in internet job postings for the Education and training, and Public administration and safety industries. Employers seek applicants that are able to improve student learning outcomes through teaching or some form of program. School psychologists, Teachers and Deputy principals are some examples of internet job postings requesting that skill.

What specialised skills are trending and emerging in ICT and telecommunications?

This section provides information on the trending and emerging skills in internet job postings for '[ICT and telecommunications technicians \(313\)](#)' – the occupation (ANZSCO Minor Group) related to [Certificate III in Information, Digital Media and Technology](#). Note that the ranking of skills is within that occupation.

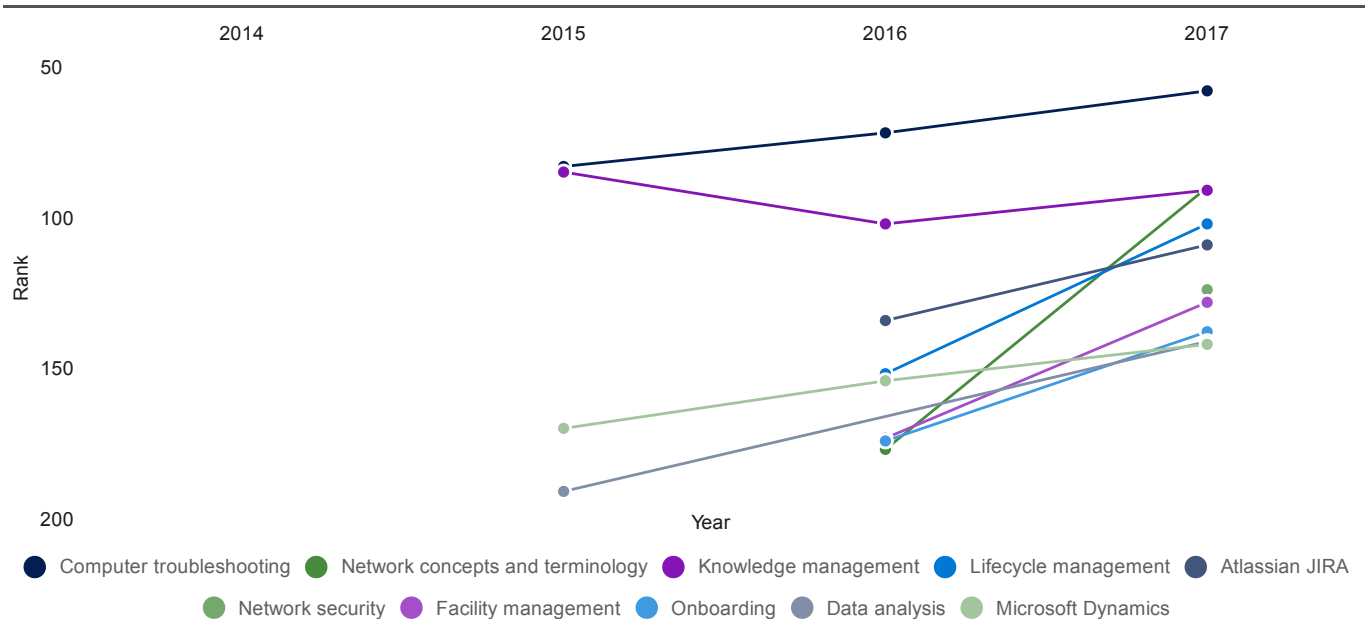
Trending and emerging skills in internet job postings for ICT and Telecommunications Technicians, 2014–17

Trending



Download data

Emerging



Download data

Note: The ranking of skills in internet job postings for ICT and telecommunications technicians (313) is based on a small number of job postings and should be used with caution.

Amongst all trending skills in internet job postings, Triage had the largest increase in skill rankings from 2014 to 2017 – an increase of 91 rankings (46%); followed by phone systems with an increase of 82 rankings (41%); and Hyper-V with an increase of 79 rankings (40%). Hyper-V is a Microsoft's hardware virtualisation product which enables one to run multiple virtual machines on the same hardware at the same time. Some examples of jobs requesting Hyper-V are Windows server administrator, Service desk analyst and IT support engineer.

Amongst all emerging skills in internet job postings, the skill with the largest increase in rankings since it emerged is Network concepts and terminology. This skill emerged in 2016 ranked at 182 and has since had a substantial jump of 87 rankings to rank 95 in 2017 (a 44% increase in rankings). Some examples of internet job postings requesting this skill are for Service desk analyst, IT support engineer and Help desk officer.

The table below shows the matches between the subjects of the Certificate III in Information, Digital Media and Technology and the trending and emerging skills requested for 'ICT and telecommunications technicians (313)'.

Matches between the trending and emerging skills in internet job postings and VET subjects in the Certificate III in Information, Digital Media and Technology

Trending

Skills in internet job postings	Subject code	Subject title	Essential
Technical industry knowledge	ICTICT302	Install and optimise operating system software	Core
	ICTICT304	Implement system software changes	Elective
	ICTICT305	Identify and use current industry specific technologies	Elective
	ICTICT306	Migrate to new technology	Elective
	ICTNWK306	Evaluate characteristics of cloud computing solutions and services	Elective
	ICTNWK419	Identify and use current virtualisation technologies	Elective
	ICTSAS307	Install, configure and secure a small office or home office network	Elective
Hyper-V	None	None	None
Triage	None	None	None
Phone systems	ICTCBL236	Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule	Elective
	ICTCBL237	Install, maintain and modify customer premises communications cabling: ACMA Open Rule	Elective
	ICTTEN201	Use electrical skills in telecommunications work	Elective
Retail setting	None	None	None
Negotiation skills	ICTICT304	Implement system software changes	Elective
Configuration management	ICTICT302	Install and optimise operating system software	Core
Web application development	CUADIG302	Author interactive sequences	Elective
	ICTPRG301	Apply introductory programming techniques	Elective
	ICTWEB301	Create a simple markup language document	Elective
	ICTWEB302	Build simple websites using commercial programs	Elective
	ICTWEB303	Produce digital images for the web	Elective
Customer relationship management (CRM)	None	None	None
Python	None	None	None

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Emerging

Skills in internet job postings	Subject code	Subject title	Essential
Computer troubleshooting	ICTNWK304	Administer network peripherals	Elective
	ICTSAS301	Run standard diagnostic tests	Core
Network concepts and terminology	ICTICT202	Work and communicate effectively in an ICT environment	Core
	ICTICT305	Identify and use current industry specific technologies	Elective
	ICTNWK305	Install and manage network protocols	Elective
	ICTSAS307	Install, configure and secure a small office or home office network	Elective
	ICTWHS204	Follow work health and safety and environmental policy and procedures	Elective
Knowledge management	ICTICT308	Use advanced features of computer applications	Elective
	ICTNWK419	Identify and use current virtualisation technologies	Elective
Lifecycle management	ICTSAS306	Maintain equipment and software	Elective
Atlassian JIRA	None	None	None
Network security	BSBIPR301	Comply with organisational requirements for protection and use of intellectual property	Elective
	ICTNWK301	Provide network systems administration	Elective
	ICTNWK303	Configure and administer a network operating system	Elective
	ICTSAS307	Install, configure and secure a small office or home office network	Elective
Facility management	ICTICT305	Identify and use current industry specific technologies	Elective
	BSBSUS401	Implement and monitor environmentally sustainable work practices	Core
	BSBWHS304	Participate effectively in WHS communication and consultation processes	Core
	ICTNWK301	Provide network systems administration	Elective
	ICTSAS303	Care for computer hardware	Elective
	ICTSAS306	Maintain equipment and software	Elective
Onboarding	ICTICT202	Work and communicate effectively in an ICT environment	Core
Data analysis	BSBEBU401	Review and maintain a website	Elective
Microsoft dynamics	None	None	None

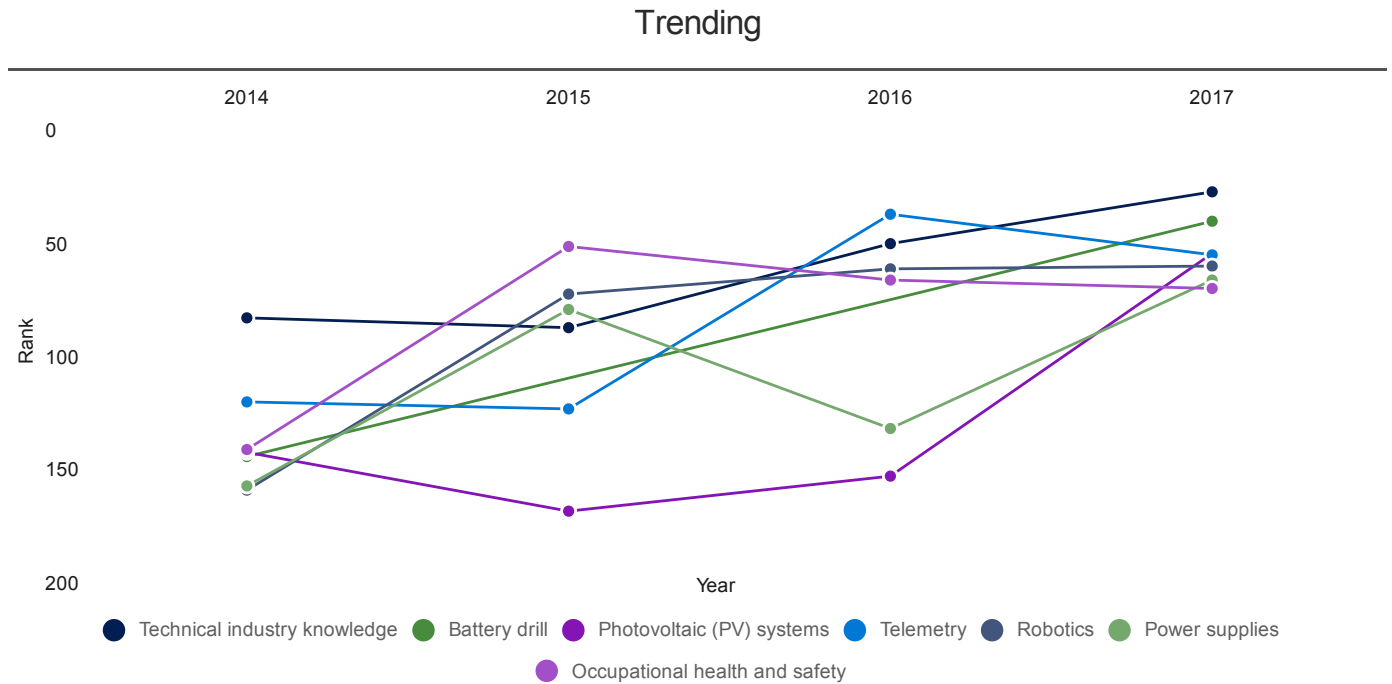
Note: Matching of skills in internet job postings to corresponding subjects was manually determined based on the title and description of the subject.

Most trending and emerging skills in internet job postings are covered by the relevant subjects offered by the Certificate III in Information, Digital Media and Technology. The exceptions are software packages and other products such as Hyper-V, Customer relationship management (CRM), Atlassian JIRA, Microsoft Dynamics and the programming language, Python. Triage and retail setting also do not have a corresponding subject. However, skills in software packages and other products may have been developed on the job whilst undertaking the training or in unaccredited/vendor training. For example, Atlassian offers its own vendor training and certification for its own products including JIRA. The working paper 'Developing appropriate workforce skills for Australia's emerging digital economy' (Gekara et al. 2017) assessed that whilst employers tend to define skills from a tools perspective, the training packages offered by VET provide the foundational skills essential for people to work in a digital economy.

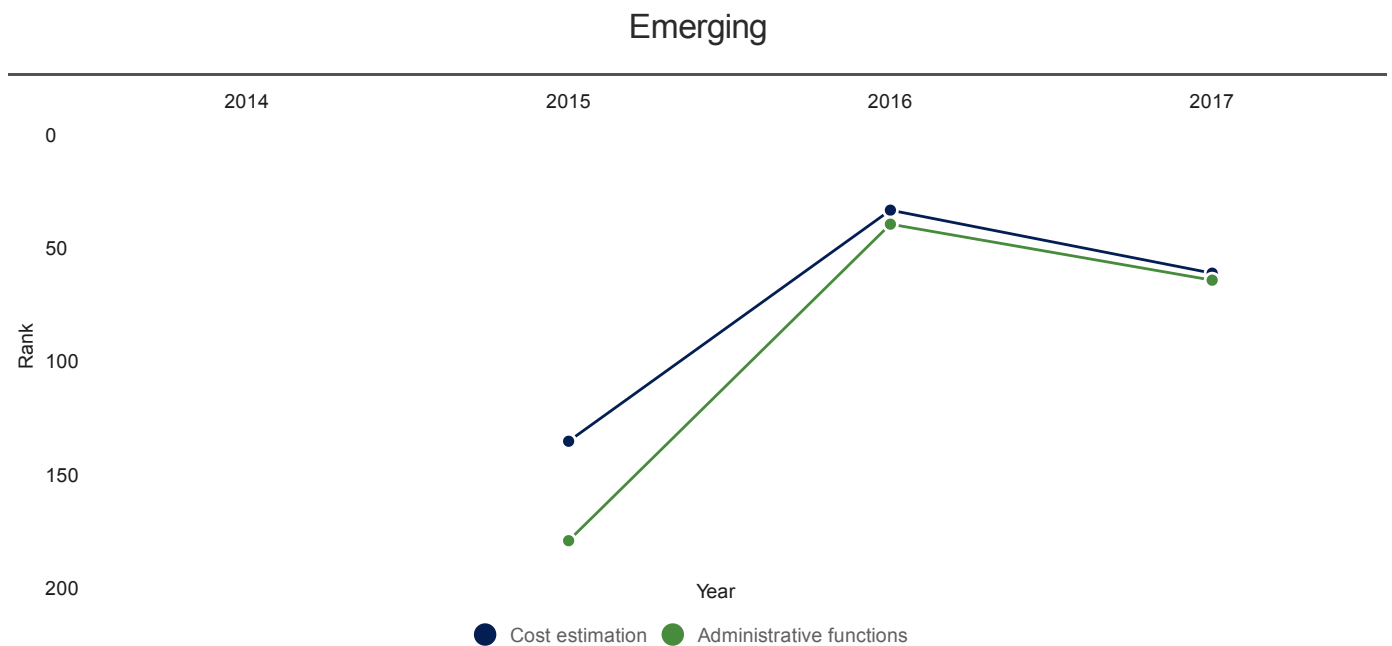
What specialised skills are trending and emerging for Electricians?

This section provides information on the trending and emerging skills in internet job postings for 'Electricians (341)' – the occupation (ANZSCO Minor Group) related to Certificate III in Electrotechnology Electrician. Note that the ranking of skills is within that occupation.

Trending and emerging skills in internet job postings for Electricians, 2014–17



[Download data](#)



[Download data](#)

Note: The ranking of skills in internet job postings for Electricians (341) is based on a small number of internet job postings and should be used with caution.

Amongst all trending skills in internet job postings, the ranking of robotics has been increasing every year from 2014 to 2017. Note that there are 'missing' points for battery drill for the years 2015 and 2016 – this is because the skill did not make it to the top 200 requested skills for Electricians in those years. Telemetry is an automated process where data or measurements are taken remotely and transmitted to a centralised system for monitoring. Some examples of internet job postings requesting telemetry are Electrical supervisor, Industrial electrician and Signal electrician.

There are only two emerging skills in internet job postings for Electricians – cost estimation and administrative functions. Both skills emerged at the same year in 2015, and followed a similar trend in the subsequent years.

The table below shows the matches of the subjects or units of competency of Certificate III in Electrotechnology Electrician, with the trending and emerging skills in internet job postings for 'Electricians (341)'.

Matches between the trending and emerging skills in internet job postings and VET subjects for the Certificate III in Electrotechnology Electrician, 2014–17

Trending

Skills in internet job postings	Subject code	Subject title	Essential
Technical industry knowledge	UEENEEC020B	Participate in electrical work and competency development activities	Core
	UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	Core
	UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	Core
	UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	Core
	UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	Core
	UEENEEG181A	Provide advice on effective and energy efficient lighting products	Elective
	UEENEEG183A	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect	Elective
Battery drill	UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	Core
Photovoltaic (PV) Systems	UEENEEK125A	Solve basic problems in photovoltaic energy apparatus and systems	Elective
	UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	Core
	UEENEEK148A	Install, configure and commission LV grid connected photovoltaic power systems	Elective
Telemetry	None	None	None
Robotics	None	None	None
Power supplies	UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	Core
	UEENEEE104A	Solve problems in d.c. circuits	Core
	UEENEEG006A	Solve problems in single and three phase low voltage machines	Core
	UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	Core
	UEENEEG063A	Arrange circuits, control and protection for general electrical installations	Core
	UEENEEG103A	Install low voltage wiring and accessories	Core
	UEENEEG104A	Install appliances, switchgear and associated accessories for low voltage electrical installations	Core
	UEENEEG111A	Carry out basic repairs to electrical components and equipment	Elective
	UEENEEG126A	Install and maintain field power and distribution systems with a low voltage demand up to 200 A per phase	Elective
	UEENEEH111A	Troubleshoot single phase input d.c. power supplies	Elective
	UETTDRSB23A	Install and maintain substation direct current systems	Elective
Occupational health and safety	CPCCOHS1001A	Work safely in the construction industry	Elective
	UEENEEE009B	Comply with scheduled and preventative maintenance program processes	Elective
	UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	Elective
	UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	Core
	UEENEEE105A	Fix and secure electrotechnology equipment	Core
	UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	Core

 [Download data](#)

Emerging

Skills in internet job postings	Subject code	Subject title	Essential
Cost estimation	UEENEEC002B	Source and purchase material/parts for installation or service jobs	Elective
	UEENEEC003B	Provide quotations for installation or service jobs	Elective
Administrative functions	UEENEEED101A	Use computer applications relevant to a workplace	Elective
	UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	Core

 [Download data](#)

Note: Matching of skills in internet job postings to corresponding subjects was manually determined based on the title and description of the subject.

Most of the trending skills and both emerging skills in internet job postings are well covered by the subjects or units of competency offered by the Certificate III in Electrotechnology Electrician. Telemetry and robotics are the only two trending skills that do not have a corresponding unit of competency. However, these skills could be obtained through vendor training.

Further information

Note: Some skills were removed from the trending or emerging skills list due to miscoding of skills in the job postings. For more information, please refer to the accompanying technical paper: <<https://www.ncver.edu.au/publications/publications/all-publications/Internet-job-postings-preliminary-skills-analysis>>

Data source:

Burning Glass Technologies 2018, Labour Insight Real-time Labour Market Information Tool, Burning Glass Technologies, Boston, viewed April 2018, <<https://www.burning-glass.com>>.

References:

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National Centre for Vocational Education Research (NCVER) 2017, Australian vocational education and training statistics: employers' use and views of the VET system 2017, NCVET, Adelaide.

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For details and exceptions visit the [NCVER Portal](#).

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