

ICT Opportunities of the Future

September 2019



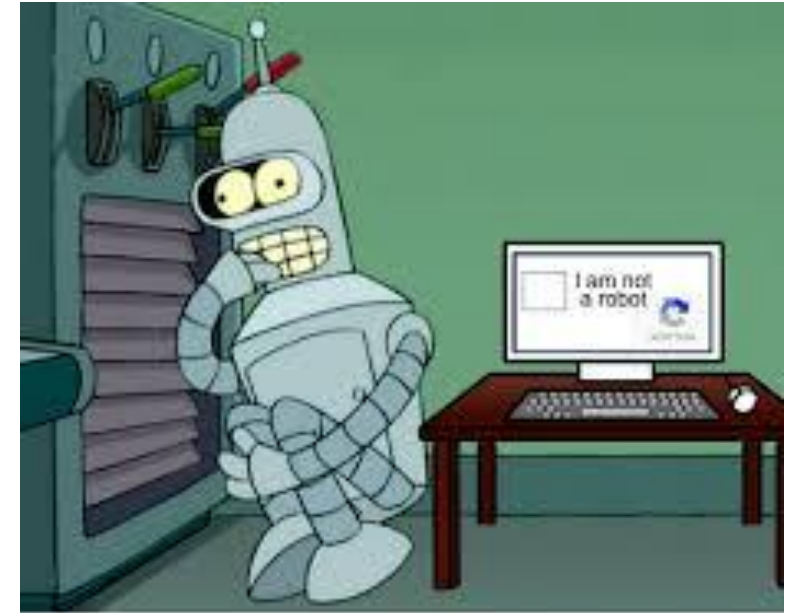
Knowledge Partner

My Career

Chief Technology Officer

- Being a technology evangelist for the company
- Providing technology leadership and direction for ES2 Sales and Services
- Provide technical direction for internal tools, processes and controls
- Provide focus and direction on technological issues
- Provide Technology Strategy and communicate the direction
- Evaluate Vendors and align go-to-market
- Ensure technology direction is supported by delivery teams (aka Training/Awareness)
- Provide Technical Pre-Sales (Vendor/Services)
- Point of project and client escalation
- Monitor quality of technical delivery and Managed Services
- Monitor quality of technical development and project deliverables
- Keeping active and hands on – delivering projects and leading Incident Response.

As we race through the 21st century, Aussies are left wondering if the job they're working in 2019 will exist in 10, 15 — even five years.



Not a robot

ICT a good place to be



ICT News

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It's time to change normal.

DISCOVER MORE

Tech jobs on the rise in Australia

ABS says 33,000 new jobs created in last three years.

By Denham Sadler on Sep 02 2019 11:14 PM

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Tech jobs are the third-fastest growing in the country, with nearly 33,000 new jobs created in the last three years, according to the Australian Bureau of Statistics.

The ABS has tracked the growth and decline of jobs and industries in Australia on a quarterly basis for more than 30 years. *The Australian* recently collated these statistics, revealing which jobs are most in demand and which occupations should be avoided, focusing on the last three years.

It found that software and applications development, information technology support and information systems management were the fastest growing occupations in the last three years.



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<https://ia.acs.org.au/article/2019/tech-jobs-on-the-rise-in-australia.html>

Cyber Skills Shortage



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Combining Human Expertise and Automation to Close the Cyber Skills Gap



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CYBERSECURITY SNIPPETS

By Jon Oltsik, CSO | MAY 10, 2018 8:20 AM PDT

About

Jon Oltsik is a principal analyst at Enterprise Strategy Group ESG and has been quoted in the Wall Street Journal, Business Week, and the New York Times.

ANALYSIS

Is the cybersecurity skills shortage getting worse?

New research indicates that things are not improving for filling the demand for cybersecurity skills. The ramifications are widespread.

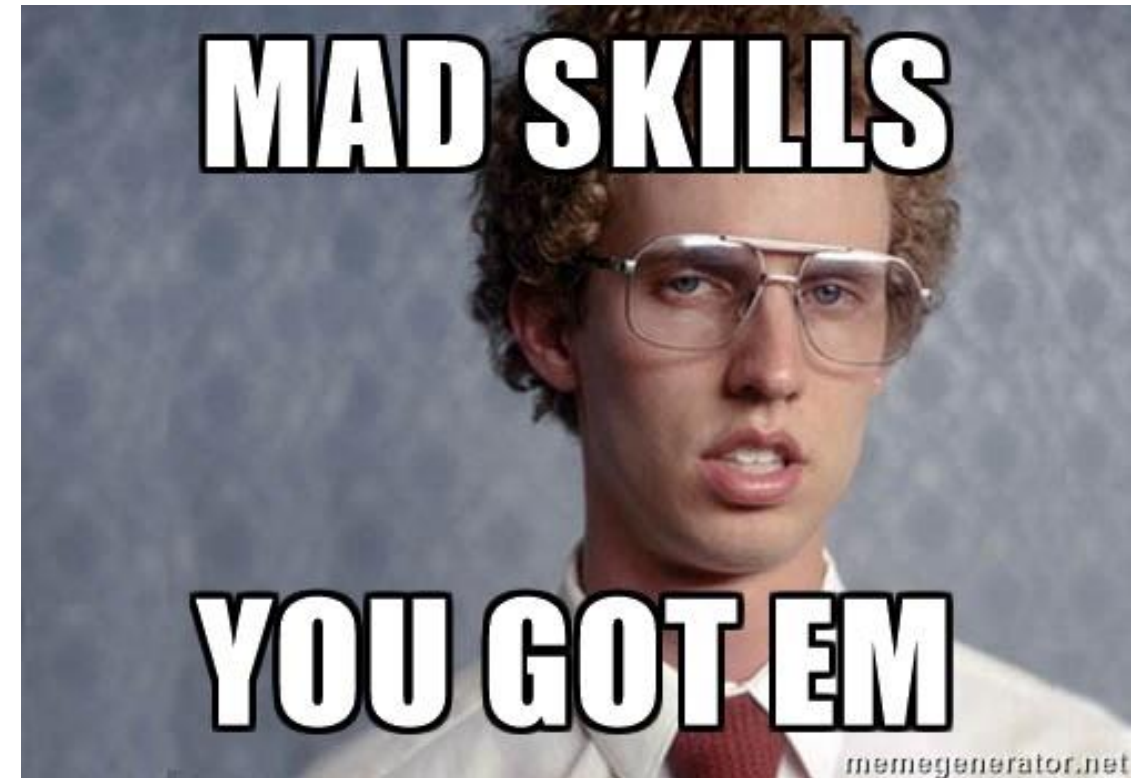
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- The total value of ICT use across the WA economy lies somewhere around \$24.1 billion.
- Annual job growth rate in ICT is 3.5%.
- Of similar size to the agriculture, fisheries and forestry combined together.



- The growth in employment in the WA ICT sector has outstripped the national average.
- The biggest constraint on using or increasing use of ICT was identified as being a shortage of skilled people.
- In Australia – currently 640,000 employed in IT, 722,000 expected in 2022



Technology Trends - Robotics

- Industrial robots have become commonplace in factories, gaining popularity for their productivity and profitability.
- Adoption of Industrial Internet of Things (IIoT) Technology (Smart Sensors)
- Industrial Cybersecurity is becoming a Priority



Technology Trends - Robotics

- Big Data Analysis is becoming a Competitive Differentiator
- Virtual Solutions Will Invade Physical Processes
- Collaborative Robots Will Continue to Grow in Popularity



Technology Trends – Smart Cars / Autonomous Vehicles

- Software in the Automotive Supply Chain Presents a Major Risk
- Connected Vehicles Offer Unique Challenges
- Pressure to meet product deadlines, accidental coding errors



Technology Trends – Smart Cars / Autonomous Vehicles

- Software Security Is Not Keeping Pace with Technology in the Auto Industry
- 30% of companies do not have an established product cybersecurity program or team
- 63% of companies test less than half of hardware, software & other tech for vulnerabilities



Technology Trends – Artificial Intelligence / Machine Learning

- Marinus Analytics uses Amazon Rekognition to find human trafficking victims who may have changed their appearance
- Intuit uses Machine Learning to automatically identify tax deductions for their customers, saving each an average of \$4,300



Technology Trends – Artificial Intelligence / Machine Learning

- Woodside uses Image Recognition and Machine learning to carry out regular field inspections
- GE Healthcare uses Deep Learning to improve the accuracy of x-ray imaging procedures while also lowering readmission rates.



Technology Trends – Adding intelligence to applications



Recommendations

Personalize experiences for your customers with the same recommendation technology used at Amazon.com.

[AMAZON PERSONALIZE »](#)



Forecasting

Build accurate forecasting models based on the same machine learning forecasting technology used by Amazon.com.

[AMAZON FORECAST »](#)



Image and Video Analysis

Add image and video analysis to your applications to catalog assets, automate media workflows, and extract meaning.

[AMAZON REKOGNITION »](#)

Technology Trends – Adding intelligence to applications



Advanced Text Analytics

Use natural language processing to extract insights and relationships from unstructured text.

[AMAZON COMPREHEND »](#)



Document Analysis

Automatically extract text and data from millions of documents in just hours, reducing manual efforts.

[AMAZON TEXTTRACT »](#)



Voice

Turn text into lifelike speech to give voice to your applications.

[AMAZON POLLY »](#)

Technology Trends – Adding intelligence to applications



Conversational Agents

Easily build conversational agents to improve customer service and increase contact center efficiency.

[AMAZON LEX »](#)



Translation

Expand your reach through efficient and cost-effective translation to reach audiences in multiple languages.

[AMAZON TRANSLATE »](#)



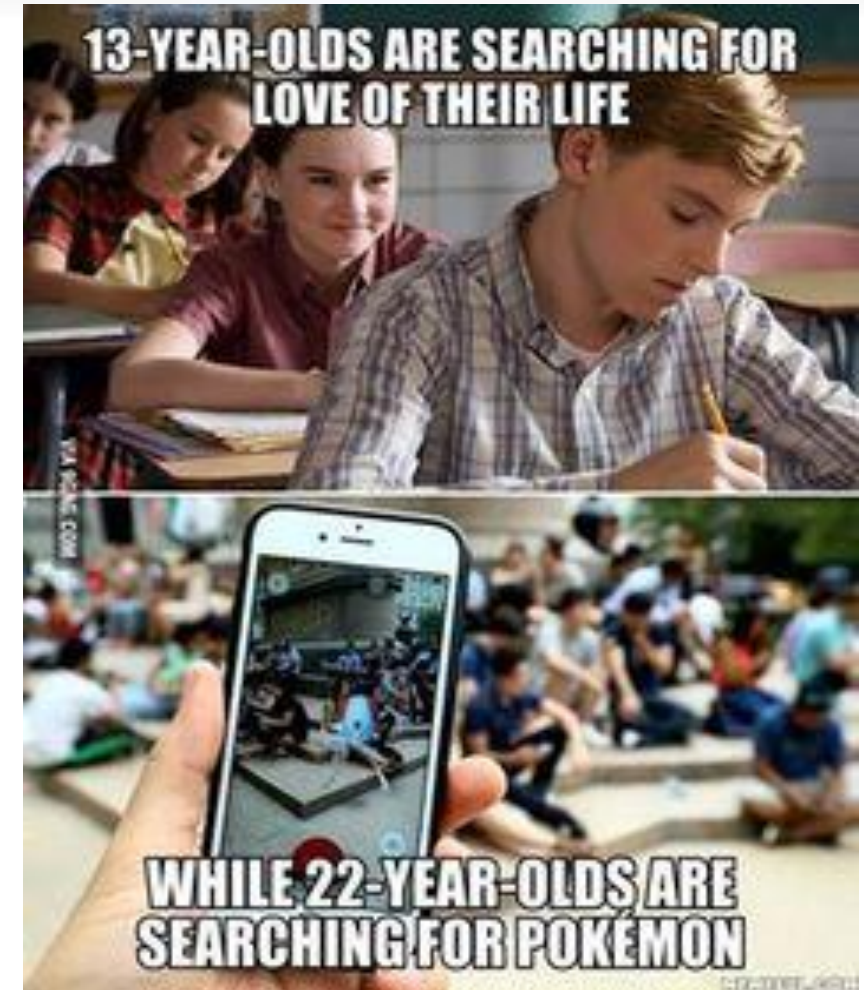
Transcription

Easily add high-quality speech-to-text capabilities to your applications and workflows.

[AMAZON TRANSCRIBE »](#)

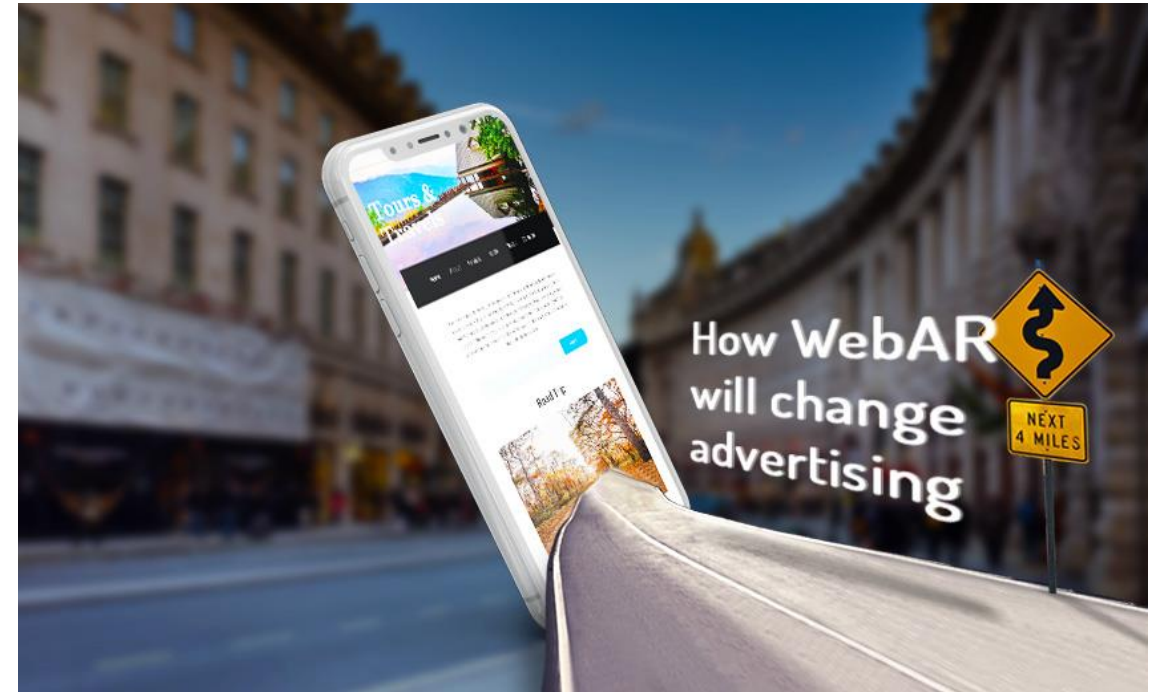
Technology Trends – Augmented Reality

- Mass market adoption of the technology through social media
- Apps with large install bases as a distribution channel (i.e. SnapChat, Shazam) and gaming (Pokémon Go, Angry Birds Explore)
- Apple and Google commitment to deliver AR at the OS level on billions of devices



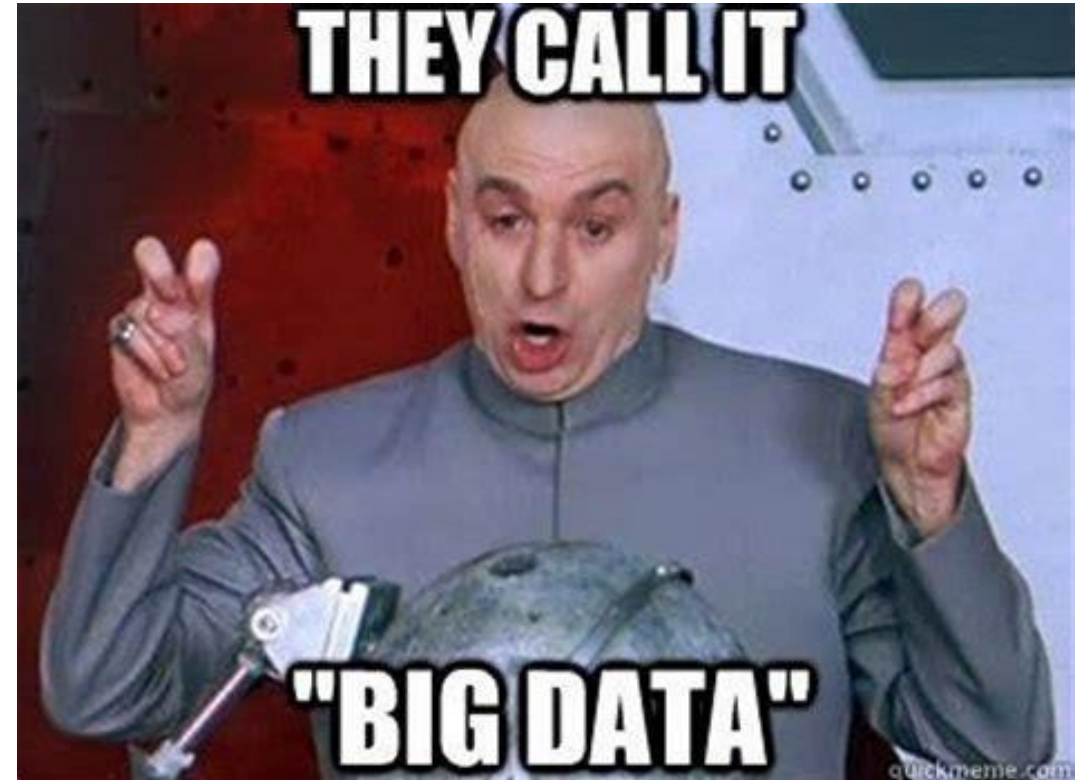
Technology Trends – Augmented Reality

- Web AR provides the broadest possible distribution method for augmented reality without the need for an app download
- 5G will continue to make AR more seamless and allow for increasingly rich and immersive experiences.



Technology Trends – Data Analytics

- Data Analysis Automation
- IoT Merged with Data Analytics
- Data-As-A-Service
- Augmented Analytics
- Smart Cities Development
- Consumer Device Developments
- Enterprise Content Management



Technology Trends - Businesses are moving to the Cloud

- Dashboards
- Data Management
- Data Retention
- Data Analytics
- Data Loss
- Serverless Workloads
- Cloud Native Applications

INNOVATION
PERFORMANCE
AGILITY
SECURITY
FLEXIBILITY

Picking a Career



Advisors

- Audits
- Consultants
- Sales
- Pre-Sales

ICT Renumeration and Opportunities

ICT Support Technician (\$1,498 a week)



Future Growth
Very strong

- Either extensive experience or a formal qualification in information technology is needed to work as an Support Technician.

ICT Business Analyst (\$2,274 a week)



Future Growth
Strong

- No Formal Qualification, demonstrate your technical competency to employers. Wide range of vendor and industry certifications can act as substitute for formal qualifications. English, Maths, Computer Skills, Office Skills

ICT Network Professional (\$2,021 a week)



Future Growth
Strong

- No Formal Qualification, demonstrate your technical competency to employers. Wide range of vendor and industry certifications can act as substitute for formal qualifications and can be highly regarded by employers.

ICT Renumeration and Opportunities

ICT Manager (\$2,766 a week)



Future Growth
Strong

- You usually need formal qualifications and experience in management and the industry to work as an Manager. Managers often have university qualifications.

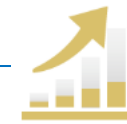
ICT Sales Professional (\$2,951 a week)



Future Growth
Stable

- Either extensive experience or a formal qualification in information technology, business management or another related field is needed to work as a Sales Professional

ICT Administrator (\$1,932 a week)



Future Growth
Moderate

- You can work as a Database or Systems Administrator, without formal qualifications if you are able to demonstrate your technical competency to employers.

ICT Renumeration and Opportunities

ICT Support & Test Engineer (\$2,019 a week)



Future Growth
Very strong

- No Formal Qualification, demonstrate your technical competency to employers. Wide range of vendor and industry certifications can act as substitute for formal qualifications and can be highly regarded by employers.

ICT Developer/ Programmer (\$2,003 a week)



Future Growth
Very strong

- No Formal Qualification, demonstrate your technical competency to employers. Wide range of vendor and industry certifications can act as substitute for formal qualifications and can be highly regarded by employers. Most hold university qualification.

ICT Security (~~\$1,002 a week~~)



Future Growth
~~Moderate~~

- No Formal Qualification, demonstrate your technical competency to employers. Wide range of vendor and industry certifications can act as substitute for formal qualifications and can be highly regarded by employers. Most hold university qualification.

Skills of the future (as defined by employers)

Project management, Agile Coaches

Artificial Intelligence, Machine learning

Automation/Robotics

Software Engineering

Basic networking

Wireless Networking

Open-source skills

Network convergence

Business intelligence – Data Mining, Data Analysis, Data Science

Cyber Security

Human computer interaction

Cloud/Software as a Service

C#, C++, Java, .NET, Ruby, Python

Application mobilization, UX/UI development and design.

Tips for landing your first ICT Job.

- Investigate Graduate Programs early
- Watch what you post online
- Join Special Interest Groups (MeetUp, EventBrite)
- Networking
- Ensure your resume reflects who you are
- Be Passionate
- Be Polite
- Be Persistent (Right Place, Right Time)





Questions?

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