



TRENDS, JOBS AND SKILLS FOR ICT PROFESSIONALS

Key Insights

Research Partnership between **National Trades Union Congress (NTUC)**,
Tech Talent Assembly (TTAB) and **NTUC LearningHub**

GLOBAL TRENDS



- Automation/Robotics**
- "Lights Out" Operations
 - Touchless Technologies
 - Remote Asset Monitoring



- Advanced Data Analytics**
- Data Science
 - Artificial Intelligence
 - Machine Learning



- Internet of Things & Sensorisation**
- Digital Twins
 - Biotechnology

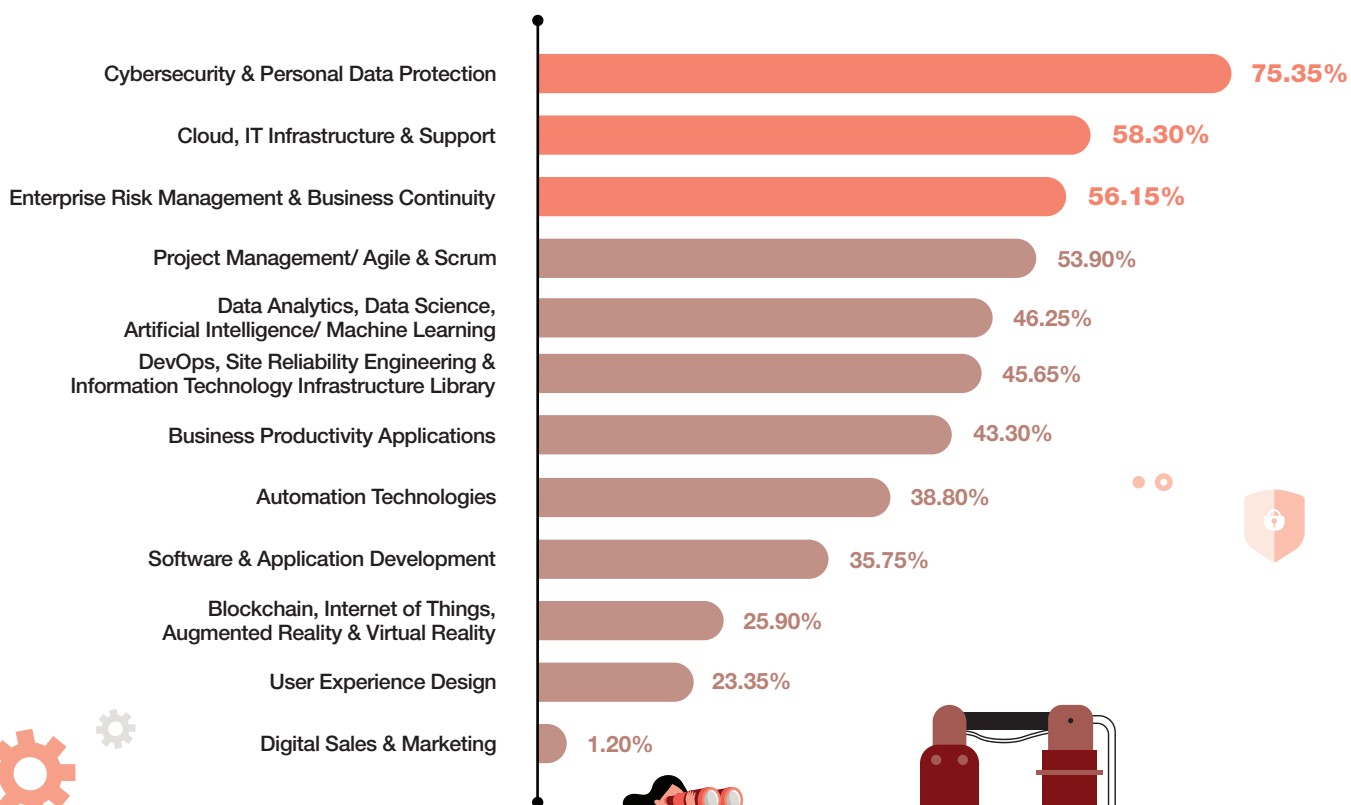


- Security & Privacy**
- Quantum-based and Blockchain-based Cybersecurity
 - Defensive Artificial Intelligence
 - Behavioural Analytics



- Business Model Innovation**
- Metaverse

SKILLS MISMATCH BETWEEN DEMAND AND SUPPLY OF ICT SKILLS



KEY ICT JOB VACANCIES

Tech-lite

E-Commerce Manager

Digital Marketing Manager

Data Analyst

Compliance Analyst

Systems Analyst

Tech-heavy

Cyber Security Engineer

Software, Web & Multimedia Developers

Network, Communications & Infrastructure Engineer

DevOps Engineer

Data Engineer

EMERGING SKILLS

In the coming years, workers will need to have a mix of highly transferable capabilities in addition to technical skills, with digital fluency as the foundation to enhance employability.

TECHNICAL SKILLS

- Data Analytics
- Cyber Security and Data Protection
- Cloud Computing
- Software Engineering
- Metaverse and Blockchain
- Digital Marketing
- Distributed Ledger Technology
- Data Governance
- 5G Engineering
- DevOps/ Quantum Engineering

TRANSFERABLE CAPABILITIES

- Critical Thinking
- Problem Solving
- Communication Skills
- Situational Management Skills
- Stakeholder Management
- Design Thinking
- Learning Agility
- Sense-making
- Project Management
- Computational Thinking

Digital fluency as the foundation to discover meaning from data and communicate ideas with digital tools

KEY RECOMMENDATIONS

How unions can help, together with tripartite partners:



1



LEVERAGE

the resources and expertise of the veteran ICT Professionals.

2



IDENTIFY

higher-value and deep-tech job roles that mid-careerists can move into.

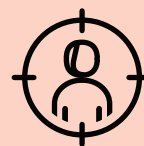
3



PROMOTE

the formation of Special Interest Groups that enable exchange of skills and knowledge.

4



ADOPT

skills-based approach to hiring and developing talent.

5



CURATE

relevant training programmes to reskill and upskill ICT Professional.



To view the full report, visit www.ntuc.org.sg/Research-TrendsForICT

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