

SKILLSFUTURE JOBS-SKILLS INSIGHTS

Never Too Late:
Navigating a
Mid-career Transition
to Tech Sector

Publication by

SKILLS*future* SG

In partnership with

Generation
SINGAPORE

July 2023



INTRODUCTION

Technology has certainly reshaped the way we live in this rapidly evolving world.

While the recent global tech layoffs may sound concerning, the demand for tech professionals remains remarkably high across the economy. Job posting data shows that demand for tech roles grew by **70%** from Q4 2022 to Q1 2023^[1].

New tech jobs are continuously being generated in the economy. In 2022, nearly seven in ten of all vacancies in information and communications were new positions, according to a [report by the Ministry of Manpower](#)^[2]. This was the highest level across all sectors for the third consecutive year. Across job vacancies, tech talents in software development and applications management continue to be highly sought after, the report added.

This high demand for digital skills persists as sectors continue to pursue digital transformation. In this space, there are career opportunities for Singaporeans, including mid-career workers looking for a career transition.



^[1] Source: Salaryboard

^[2] Labour Market Statistics and Publications; Job Vacancies Report 2022,MOM.
<https://stats.mom.gov.sg/Pages/Job-Vacancies-2022.aspx>

5 TECH-HEAVY ROLES FEASIBLE FOR MID-CAREERISTS

SSG has identified some job roles, broadly regarded as out-of-reach for the non-technical mid-careerist, which are in fact feasible for some of such mid-careerists to transit into. These tech-heavy^[3] (but more accessible) roles are:

Associate Security Analyst - Drives security education and awareness in an organisation by providing advice and guidance on potential risks, mitigation strategies and best practices;

Incident Investigator - Detects and reports cyber and data-related incidents, identifies affected systems and user groups, triggers alerts and announcements to relevant stakeholders and efficient resolution of the situation;

Forensics Investigator - Develops and manages digital forensic investigation and reporting plan which specifies the tools, methods, procedures and practices to be used;

Associate Software Engineer - Integrates data or functions from one application programme with that of another application programme; and

Software Engineer - Configures software products, analytics and modelling solutions, and applies and/or modify scripts and automation tools to integrate and deploy releases to various platforms and operating environments

These job roles account for **84%** of the tech-heavy job postings from 2018 to 2022.

We consider these roles more suited for mid-career transitioners compared to other tech-heavy positions, based on the following:

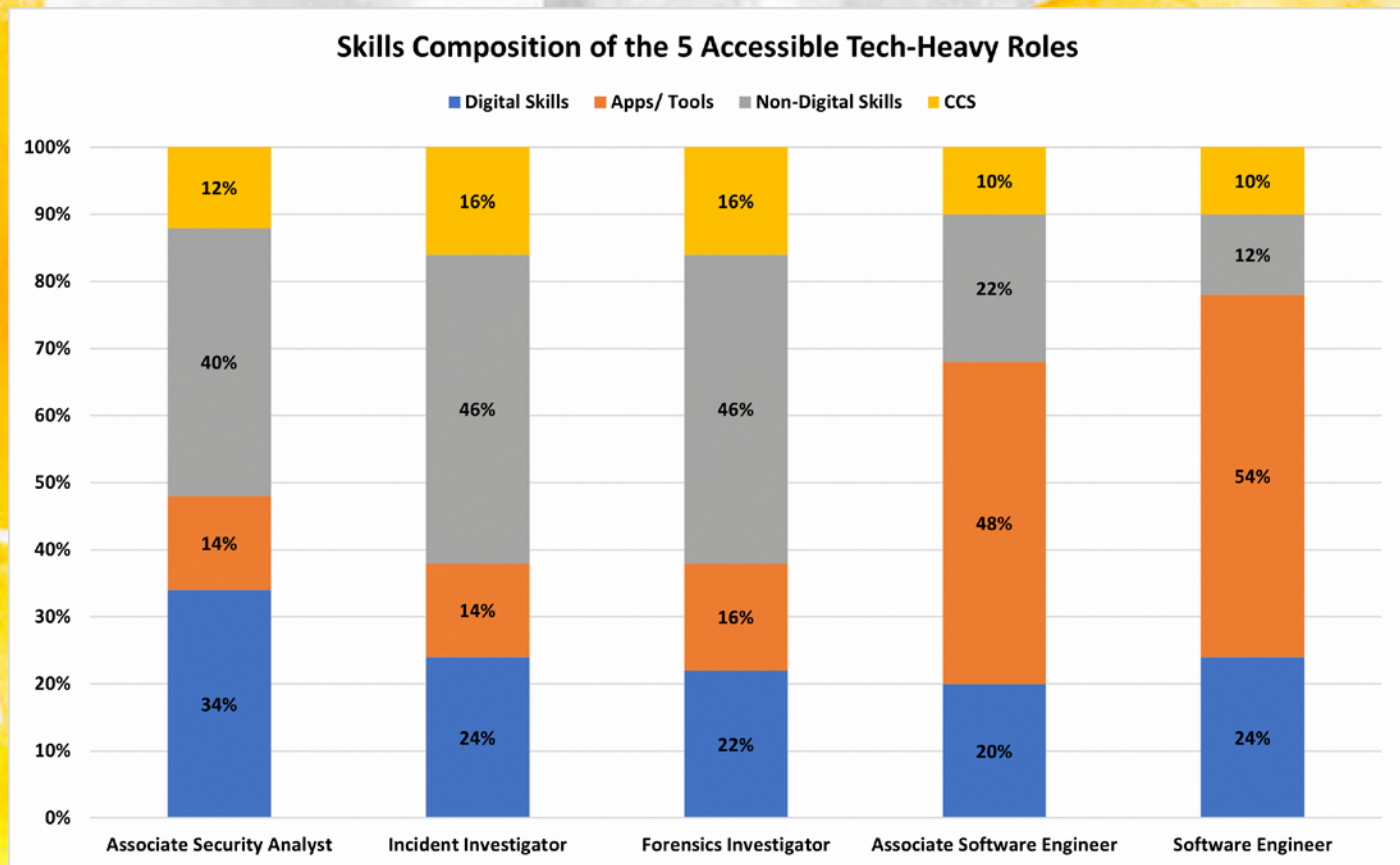
- (a) They have more entry-level positions that can serve as a first job role for a transitioner;
- (b) The required proficiency levels of digital skills are more attainable;
- (c) Non-technical skills, which can be picked up by individuals in different careers, comprise a larger share of the skills requirements to perform these roles (see Annex A).

While these opportunities are more accessible, mid-career transitioners should still be prepared to upskill and gain a certain level of technical know-how, to be considered for such roles.

^[3] Tech-heavy roles are specialised roles responsible for the development, implementation and maintenance of more complex technological solutions and applications.

SSG analysed the skills required for these roles and categorised them into Digital skills, Apps/ Tools, Non-digital skills, and Critical Core Skills (see Chart 1).

Chart 1: Skills Composition of the 5 Accessible Tech-Heavy Roles



Digital skills such as **Software Design, Product Development, and Cyber and Data Breach Incident Management** are highly demanded and transferable across multiple tech roles.

Python, Java, and SQL are among the most frequently demanded Apps and Tools that employers are looking for.

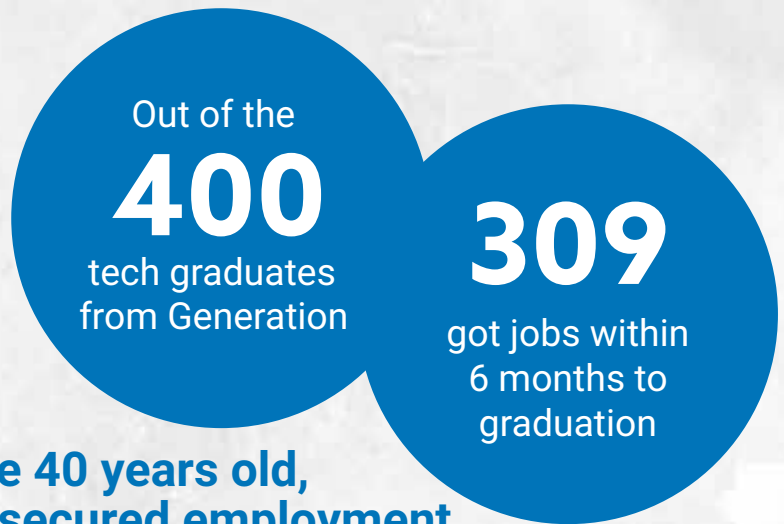
Non-digital skills such as **Apply Teamwork in the Workplace, Stakeholder Management, and Project Management** are also required to perform well in these job roles.

Last but not least, Critical Core Skills (CCS)^[4] form a small but crucial portion of the skills composition of the above-mentioned tech-heavy roles. **Communication, Adaptability, and Problem Solving** are some key CCS that reskilling efforts can focus on to have a smoother career transition.

^[4] CCS is a unique set of 16 core skills identified by Singapore employers as the most critical to thrive in the future economy.

SUPPORTING MID-CAREER TRANSITIONERS THROUGH GENERATION SINGAPORE

Generation Singapore a non-profit employment organisation with a mission to provide sustainable careers to under-served jobseekers, has demonstrated through its programme graduates that transitioning to the tech sector is possible for mid-career individuals.



103 are above 40 years old, 92% of them secured employment in tech-related positions.

Profile of Generation's mid-career graduates:



GENERATION GRADUATES' STORIES OF SUCCESS

Sharon Tan

From a Journalist to Cloud Engineer

Sharon, 52 years old, is an experienced writer and journalist for many years till she felt jaded and stagnant in her career. Motivated to reinvent herself and reskill in tech, she discovered the transformative power of cloud computing and aimed to re-enter the workforce after being self-employed for long. She took the courage to apply for Generation and Microsoft's Cloud Support and DevOps bootcamp, completed the course and apprenticeship, and is now a successful cloud engineer in a trade finance company.

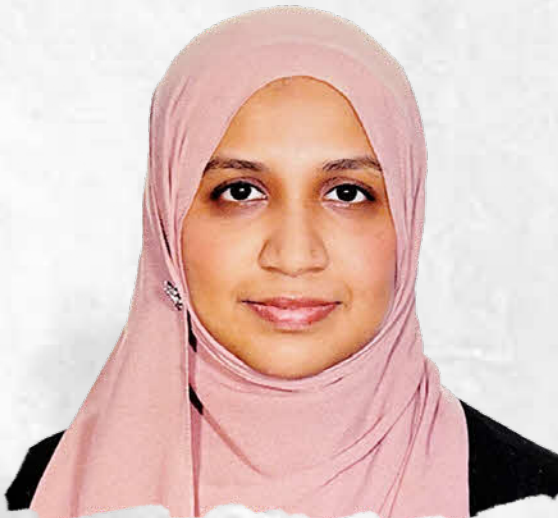
"Age is just a number, and I'm really a big supporter of lifelong learning," Sharon says.



Sameera Hassad

Mother of Three Returning to Workforce as Data Engineer

After a decade in financial services, Sameera courageously transitioned from her operations role to pursue a career in technology at the age of 42. Having a background in engineering and business, she embarked on this new path driven by her passion for learning. Taking a career break of 5 years after her third child, Sameera stumbled upon Generation and Microsoft's course during her hiatus and seized the opportunity to reskill and reenter the workforce. After completing the bootcamp and apprenticeship, Sameera has secured a position as a data engineer at Cognizant Technology Solutions.



Don't care about mistakes, you're gonna learn from them.

You must be committed all the way.

Research, research, research.

Age is just a number

Don't sell yourself short.

Reskilling is an investment, and worth it if you persevere!

Words of Encouragement from Generation's Mid-career Grads

AGE AND PAST EXPERIENCE: REAL BARRIERS OR REAL ADVANTAGE?



Dr Jeremy Fox
CEO, Asia-Pacific & Board Member,
Generation Singapore

Training is key for a successful mid-career transition.

However, according to Generation's [global midcareer report](#) conducted in 2021, while training is greatly valued by employers and 45+ individuals who have successfully switched, those who need it the most are hesitant to pursue training.

We conducted a focus group discussion with our mid-career graduates in Singapore to better understand their challenges, experiences and factors for their successful tech career shift despite their age and background. Here are some of the insights we gathered;

Challenges Faced by Mid-Career Transitioners

Mid-career transitioners encounter significant challenges when considering a shift to the tech industry. The idea of starting from scratch can be unsettling for individuals who have already established themselves in a different field, leading to emotional strain as they navigate the reskilling process. Additionally, pursuing training can be time-consuming and financially burdensome, particularly for those with familiar responsibilities.

Furthermore, the perception of competing with the younger generation, who are often regarded as naturally tech-savvy, can undermine the confidence of mid-career professionals and give rise to self-doubt. Job searches in the tech sector may also present difficulties due to perceived inexperience and heightened competition from younger candidates.

The Significance of Mindset and Transferable Skills

While our graduates candidly shared the aforementioned challenges, they also highlighted how these perceived barriers could work to their advantage. Leveraging their wealth of experience, they effectively pitch their transferable skills to potential employers, including interpersonal skills, leadership, adaptability, communication, problem-solving, analytical skills, and proactiveness, among others.

They also emphasised the importance of demonstrating the right mindsets, such as growth, learning, and openness, as tech knowledge evolves rapidly. This holistic approach is reflected in Generation's curriculum, which encompasses both hard and soft skills.

So are age and 'unrelated' work experience actually barriers for a career switch to tech? Our data and our graduates say no. By embracing training with the right mindset, experience and transferable skills can create a distinctive advantage for mid-career switchers to break into and succeed in the tech industry.

In light of this, training providers, employers, and government bodies within the education-to-employment system are strongly encouraged to collaborate closely. By working together, we can provide comprehensive support to mid-career job transitioners, ensuring their smooth transition and empowering them to embark on a fulfilling journey in the tech industry.



3-STEP STRATEGY IN STARTING YOUR RESKILLING JOURNEY

Based on the successful career transitions of Generation's mid-career graduates, here are the key strategies to consider before enrolling in a training programme.



DISCOVER your value proposition.

Identifying your passions, strengths, and transferable skills from past experiences using helpful tools and assessments such as SSG's Critical Core Skills profiling tool, Strengthsfinder or VIA Survey will help shape your personal brand. Seeking guidance from mentors in emerging industries can also validate your fit and guide you.



RESEARCH the role you aspire to work for.

Review job descriptions for the roles you find interesting. Are there gaps between your value proposition and the role's desired qualifications?

Network with industry professionals on platforms like LinkedIn or career fairs, and "prototype" your desired career path by taking on freelance projects. This hands-on experience will provide a realistic glimpse into the daily life of the role you're considering.



ADAPT to new ways of "learning to learn."

The traditional instructor-led learning approach is evolving into a hybrid model, where instructors act as facilitators and learners take charge of their own learning. This shift may be challenging for mid-career switchers accustomed to traditional methods.

To ease the transition, you can also use a [simple five-step approach](#) found in the second edition of the Skills Demand for the Future Economy Report ^[5] published by SSG in November 2022 (page 91) to assess the options available based on the intensity, attractiveness, and affordability and select those that best support your aspirations for career growth. Ultimately, mastering the "learning to learn" skill builds resilience against changes or disruptions in the job market.

^[5] Skills Demand for Future Economy 2022, SkillsFuture Singapore.
<https://www.skillsfuture.gov.sg/skillsreport>

START YOUR MID-CAREER TRANSITION JOURNEY TODAY



Transiting to a tech career requires a good level of determination, and adaptability, but can be a rewarding choice for mid-career professionals seeking new challenges and opportunities.

There are many opportunities to explore as you start your reskilling and upskilling journey. Mid-career professionals can forward to a series of professional certification programmes and courses offered by training providers and Institutes of Higher Learning (IHLs).

Some examples of courses;

[Train-and-Place Jr Full-Stack Developer \(Generation and Microsoft\)](#)

[Train-and-Place Jr Data Engineer \(Generation and Microsoft\)](#)

[Train-and-Place Cloud Support and DevOps \(Generation and Microsoft\)](#)

[SCTP Certificate in ICT \(Cyber Security & Data Analytics\) \(NYP\)](#)

[SCTP in Software Engineering \(NTU\)](#)

[42 Singapore \(SUTD\)](#)

Please visit this [link](#) for information on suggested courses for the Digital Economy.

Let us know how this report has helped you. You can also share with us other insights that you would like to find out more from us.



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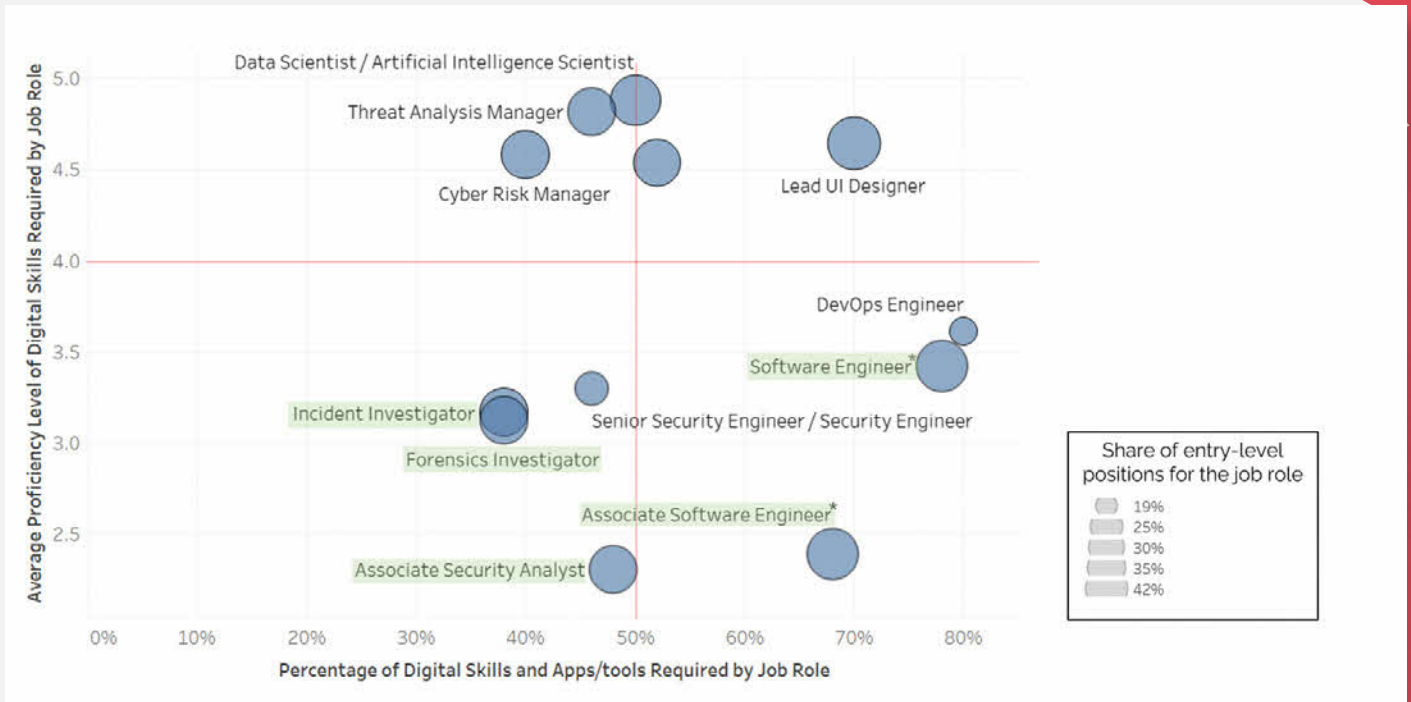
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ANNEX A: ANALYSIS OF ACCESSIBLE TECH-HEAVY ROLES



Note: SSG’s analysis of accessible tech-heavy roles looked at the following factors featured in the graph:

- Share of entry-level positions for the job role – is represented by the percentage of job postings that require 3 years or less of experience and is indicated by the size of the bubble,
- Average proficiency level of digital skills required by the job role – represents the level of technical depth required for the digital skills and is shown on the y-axis, and
- Percentage of digital skills and apps/ tools required by the job role – this is based on job posting information and is shown on the x-axis

* Job roles such as Associate Software Engineer and Software Engineer can also be considered, as their digital skills percentage is similar to that of the other highlighted roles