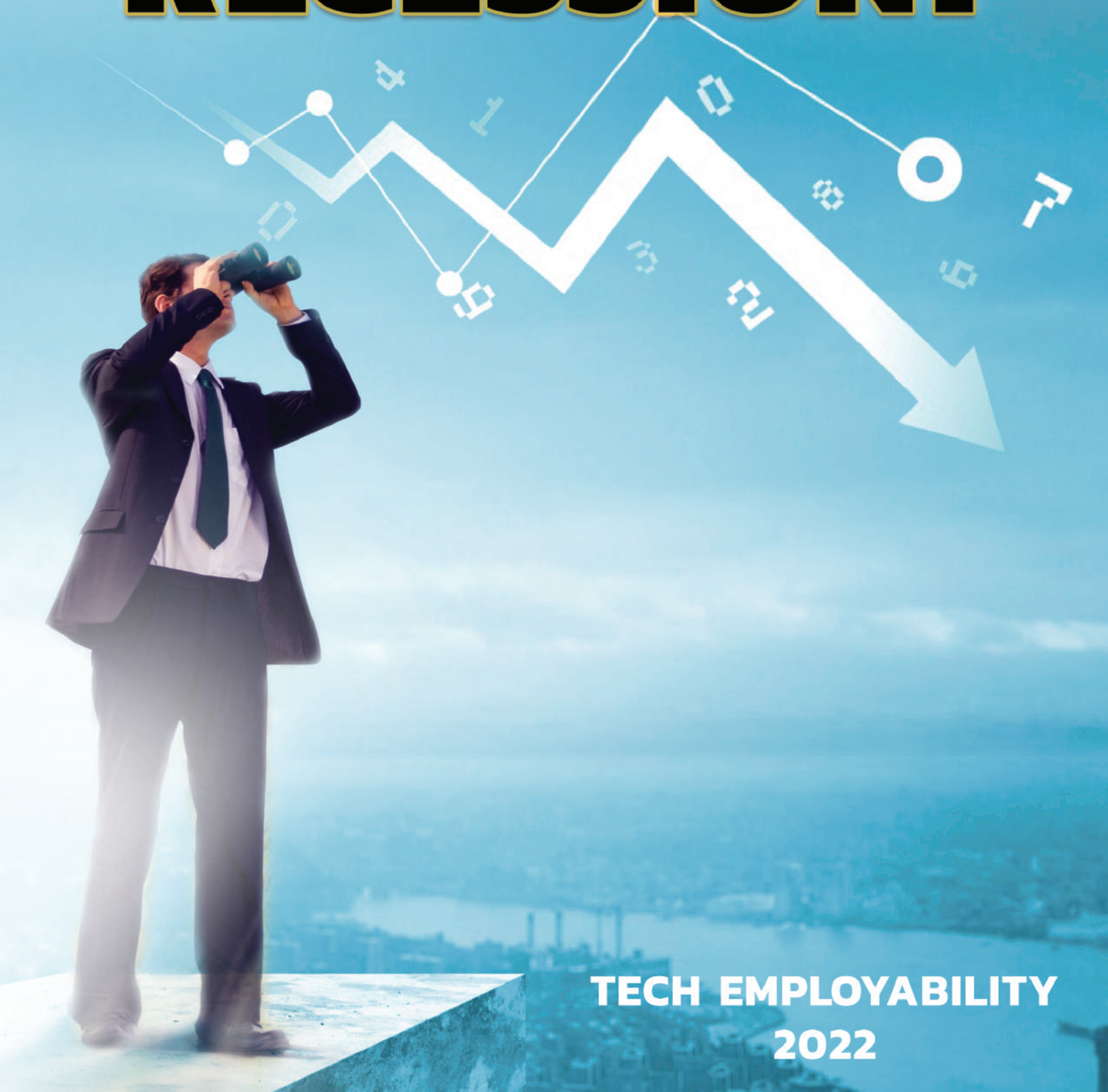
BridgeLabz

RECALIBRATE FOR RECESSION?



TECH EMPLOYABILITY 2022

Content

BridgeLabz

About
BridgeLabz Solutions

BridgeLabz is the Intel-Inside to India's digital tech revolution delivering 100% Skill-to-Job Guarantee to Job Seeker and 100% Job Readiness to Employer using its patent-pending Skill-to-Job methodology.

BridgeLabz has established a Skill-to-Job methodology that uses the proprietary TRACK tool to do Capability Comprehension of the Job Seeker at the same time work with Tech Companies to secure Contractual Mandates.

BridgeLabz has ML Algo to do the match-making post that has the ability to do custom-skilling using 100% Experiential Problem Solving technique to fill the necessary skill gap and deliver 100% Employment.

BridgeLabz has partnered with over **1000+** companies, including Yatra, Capgemini, Meru Cabs, LafargeHolcim, JDA, Urban Ladder, Fullerton India and RBL bank. It has successfully made **3500+** engineers employable to date.

Bridgelabz has won Business World Techtor Award 2020 and secured 2nd position at Global Edtech Start-up Awards 2019, India. Also, we were selected by the Maharashtra State Government as one of the Top 100 Start-ups in 2019. We are considered one of the leaders in solving tech employability and skill-gap issues that prevail in the tech space. We are recognized as MTB 2021 on CNBC TV 18.

Our mission is to fulfill the aspiration of fresh engineers to find jobs, tech companies to have qualified fresh talent, senior engineers to co-found start-ups, and seasoned professionals to develop ideas.

Being a leader in understanding employability in the tech space through comprehensive research, BridgeLabz has collated this whitepaper to highlight the major changes that have taken place in the tech space this year and the developments to look out for in the upcoming year.

Foreword

Narayan Mahadevan,
Founder, BridgeLabz Solutions

Last two years have indeed been challenging for all of us. However, now with life returning to normal, tech employability is also witnessing tremendous changes. The first step in addressing India's employment dilemma will be acknowledging and recognising a disconnect between industry 4.0 and education 4.0. The only way to promote employability is to alter the entire ecosystem, including perception, attitude, policies, how teaching is approached, and the level of company investment in its employees.

Adding skills is only going to benefit the professionals a lot in today's hiring climate. In fact, upskilling is not restricted only to freshers, even laterals or professionals with two to three years of work experience should also upskill to stay abreast with the ever-evolving technologies. When a lateral talent joins a skill enhancement program, he/she gets an in-depth understanding of the concepts and sufficient knowledge across domains. This will help fill the skill gaps and enable the talent to apply their knowledge to practicality which makes them productive at work. It will also aid his/her career growth.

Increasing women participation in tech is also the crying need of the hour. Companies need to make a conscious shift to eradicate the existing gender biases by implementing them into the core policies and practices in the workplace. This will reduce the gap between genders and strengthen the talent at companies. Also, this will open up many opportunities for women.

For becoming employable, it is imperative to focus on a strong command of coding skills foundation along with having a problem-solving and critical thinking mindset. Both of these put together will ensure that the talent will be able to meet the requirements of the current tech job ecosystem.

Executive Summary

The COVID-19 pandemic in 2020 confined people to their homes. As a result, the dependency on e-commerce sites and online learning portals shot to fame. Even today, while we are sitting in 2022, many Indian consumers depend heavily on digital and social media platforms for shopping and other requirements. In short, the dependency on digital platforms is only increasing with time. In 2020, India had around **700 million Internet users**. This number is likely to witness a surge of more than 974 million users by 2025. The increase is believed to take place in both urban and rural areas indicating growth in Internet accessibility.

With digitalization, the demand for tech talent is also increasing. Parallely, technology is evolving at such a rapid pace that the new trends seem out-of-date before they even go live. Technology-based careers do not change but evolve and the IT professionals are required to keep up with the trend by learning continuously and by keeping track of these changes. Every year the demand for technology changes. What is taught in engineering colleges is only theoretical knowledge.

By the time engineering students graduate, there is a skill gap between what they have learned and what is expected by the companies. This year we saw a rise of jobs in the technology sector and the fourth industrial revolution. E-commerce brands, fintech, manufacturing sector and similar businesses showed an upward trend for tech talent.

While on one hand, we are busy tackling the supply-demand deficit in the tech industry, there is yet another problem, recession, that is looming large over tech employability. The recession is impacting the tech industry as a lot of foreign investment is going into product startups which is now tapering off. However India's consumption story is intact and hence non-tech sectors continue to hire and look for digital talent. This explains the mass exodus of tech talent from tech sectors to non-tech or MNCs. Also, the demand is now more for hybrid or physical talent rather than completely remote. The demand from non-tech sectors also explains the need for more basic "Java" tech skills as they are starting from scratch.

Since the non-tech sector is hiring, there is a need for more experienced or lateral tech talent which has brought down the hiring of freshers for tech roles.Non tech sectors do not have the understanding and the bandwidth for training fresh talent like the tech sectors have- hence they prefer lateral or experienced talent. During the pandemic, our dependency on online mode of work had increased. However, now that we are out of the pandemic, most companies are choosing the hybrid mode of work. People are again moving and hence there is a push for physical talent which leads to high employee engagement.The lateral talent is again more in demand as a lot of low level tech talent can be upskilled or reskilled. Talent with an experience of 0-3 yrs is the focus. Every year around 1.5 million engineers graduate, out of which 50% take up low tech jobs. As a result, there are around 2-3 million lateral talents waiting to be taken to deep tech jobs.

Talent across geographies are getting the opportunity to work for leading companies. According to the BTEQ (BridgeLabz tech employability test quotient) survey; aimed to determine the readiness of the engineering talent for development jobs, conducted with more than 20,000 engineering graduates from varied streams across India revealed that the average score was at 27% in 2020 which increased to 40% in 2021 and came back to 27% in 2022. The survey also revealed that the average score of women was 42% as against 39% men in 2021 which means women were more prepared and ready to be employed as compared to men. In 2022, the average score of women is 25% as against 28% of men. For the first time in three years, the scores of women have come down. This could be because of the adoption of hybrid mode of learning.

Experienced professionals should be encouraged to upskill to stay abreast with the ever-evolving technologies. There are several lateral skill enhancement programs to offer an in-depth understanding of the concepts and sufficient knowledge across domains. The tech talent must opt for skill enhancement programs to improve their employability.

The tech industry can solve this employability challenge only by joining hands with skilling companies. When the talent has the right skill set and is job-ready, he/she will be productive at work from day one and will have an edge over the others while searching for jobs. This is especially true in the current recessionary period where if engineers have learnt using experiential learning methods they will have an edge over other talent.

Demand Variables

Variable 1: Digital presence leads to industry growth

India has been transforming digitally since the pandemic COVID-19 hit us in the year 2020. In 2020, India had around **700 million Internet users**. This number is likely to witness a surge of more than 974 million users by 2025. The increase is believed to take place in both urban and rural areas indicating growth in Internet accessibility.

With the introduction of affordable mobile data plans, the number of mobile users is also increasing at a blitzkrieg rate. The enhanced utility value of smartphones has led to mobile-heavy Internet access across India.

Due to the lockdown in 2020, people were confined to their homes. As a result, the dependency on e-commerce sites and online learning portals shot to fame. Many organizations started marketing and branding their products and services through social media platforms and other online portals. Even today, while we are sitting in 2022, many Indian consumers depend heavily on digital and social media platforms for shopping and other requirements.

According to an **analysis done by Kepios**, Internet users in India increased by 34 million (+5.4 percent) between 2021 and 2022. Similarly, GSMA Intelligence's numbers show that mobile connections in India were almost equal to 81.3 percent of the total population in January 2022. The number of mobile connections in India increased by 34 million (+3.1 percent) between 2021 and 2022.

Reports reveal that the **rate of growth** in the IT sector for 2019-20 is approximately 10 percent. The tech sector is expected to grow at almost twice the rate of the Indian economy this financial year.

Manufacturing, services, automotive, consumer, telecom, oil & energy, hospitality & tourism, and infrastructure continue to power India's white-collar job market over the last four months at a time when the overall hiring action has been on a decline amid macroeconomic headwinds and high inflation.

The non-tech cohort together put out nearly 100,000 active openings in August, accounting for 37% of the total active demand (versus 66,000 in April at the start of the fiscal year) amid a simultaneous revival in consumption and growth in some of these sectors, according to data from LinkedIn and top company job boards put together by specialist staffing firm Xpheno. Yet, the total number of open white-collar job vacancies in August fell to 260,000 from 270,000 in July and down 6% from a year earlier, the data showed. The numbers matched the low count registered in February 2021.

This is because the IT services industry, the biggest employment generator in the country, recorded its lowest count in 15 months (down 14%) as companies turn cautious about onboarding new talent amid rising wage cost and high inflation in key client markets. The entire tech cohort comprising services, products and GICs (global in-house centres, or captives of global companies in India) have been seeing a slowdown in hiring volume and velocity in the last six months.

Some of the top profiles which are in demand across non-tech sectors include 5G-linked hiring in telecom; components, consumer electronics and semiconductors-related hiring in manufacturing; electric vehicles, engineering, and R&D (research & development) hiring in auto industry; sales, customer service and operations hiring in hospitality & tourism; branch operations, customer service and analytics-linked hiring in BFSI (or banking, financial services, and insurance); and, sales, operations, and engineering-related jobs in oil and energy sectors.

Variable 2: Supply deficit continues

A Nasscom report indicates that digital core talent has grown faster than IT core talent, as companies undertook skilling initiatives to reorient the workforce. The IT talent pool in the country is expected to grow. Analysis of All India Council for Technical Education data shows that even though enrolments in undergraduate engineering courses have risen by a tenth between 2016-17 and 2019-20, demand for undergraduate IT courses have also increased.

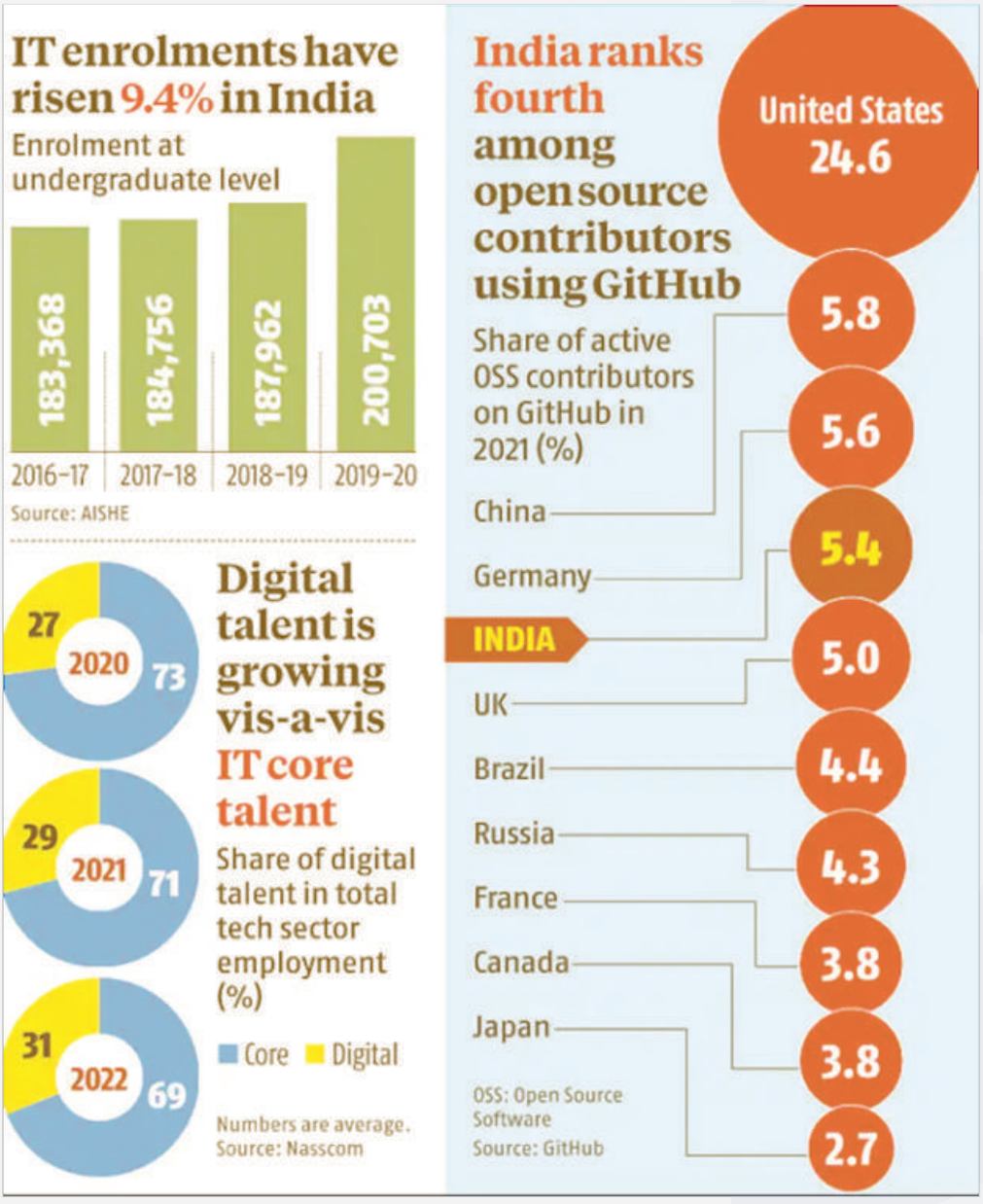


Image Courtesy: Business Standard

Although there is a spike in IT enrolments, the talent deficit ceases to exist. What is taught in engineering colleges is still only theoretical knowledge. Besides, technology is evolving at a faster rate. Each day we have new technologies and upgrades for the existing technologies that are replacing the redundant ones. Technology-based careers do not change but evolve and the IT professionals are required to keep up with the trend by learning continuously and by keeping track of these changes. Every year the demand for technology changes.

By the time engineering students graduate, there is a skill gap between what they have learned and what is expected by the companies. Thus, no matter when a talent completes his/her educational degree, it is imperative for every engineering graduate to enrol in skill enhancement programs.

According to a recent **report by Nasscom-Zinnov,** "India is likely to face a shortage of 14-19 lakh tech professionals by 2026. As compared to the current tech workforce in India, which is at 47 lakh employees (2021), the country needs 52 lakh tech professionals." By 2026, as per the report, India is likely to have 75-78 lakh tech professionals, however, the requirement then will be 93-96 lakh techies which translates to a gap of 14-19 lakh tech workforce.

Yet another report by Manpower Group revealed, "3 in 4 (around 75 percent) employers globally are having difficulty finding the talent they need, the highest in 16 years." This talent crunch has been only growing in the last decade. Global talent shortage was at 31 percent in 2010 which jumped to 34 percent in 2011, 38 percent in 2015, followed by 40 percent in 2016, 45 percent in 2018, 54 percent in 2019, and 69 percent in 2021.

Experts believe the IT services industry is currently the biggest employment generator in the country, but it recorded its lowest count over the past 16 months as most companies have been extremely cautious about onboarding new talent amid increasing wage costs and high inflation in key client markets. But the non-tech sector is currently mostly driven by positivity due to other economic indicators such as a rise in GST collections and private sector capital expenditure, and an expected revival in rural consumption.

The non-tech domain in India introduced almost 100,000 active openings for the tech talent in August 2022, accounting for over a 35% increase in active demand for tech professionals in non-tech firms in the country. Initially, there were reports saying that tech job vacancies have significantly reduced from July to August, but it was mainly because top FAANG companies announced a hiring freeze due to the adverse macroeconomic conditions in economic markets. But the non-tech sector is rapidly hiring skilled and talented tech professionals to ensure productivity and efficiency in operations.

Tech analysts also claim that the upcoming festive months will witness more revenue pop-ups. Some of the top companies across the Indian non-tech sectors are promoting 5G-automated hiring in telecom, consumer electronics, and semiconductors-related hiring in manufacturing, electric vehicles, engineering, and R&D. The Indian economy is likely to remain a service sector-led economy with various companies finding new pathways for the sector, such as moving beyond information technology and business process outsourcing to enterprise cloud networks and SaaS. Non-tech companies are hiring tech professionals who can handle these technologies efficiently and diversify the nature of business procedures across industries. Presently, the Indian IT and non-tech industry is influenced by a paradigm shift in hiring patterns.

By including non-tech talent, we can increase the talent pool and address the demand-supply deficit to a large extent.

Variable 3: Economic downturn and its impact on tech employment

While on one hand, we are busy tackling the supply-demand deficit in the tech industry, there is yet another problem, recession, that is looming large over tech employability. Economists are of the opinion that the recession is likely to hit the US by the end of this year owing to the fact that many people are struggling to cover their expenses. Big companies like Google, Microsoft, Uber, Apple, Tesla, and Meta are laying off their employees to cut costs.

According to a report by news agency IANS, "In India, more than 25,000 startup workers have lost jobs since the pandemic began -- and more than 12,000 have been fired this year." However, why are they handing over the pink slips to their employees?

Well, there are two reasons for this economic downturn. The first and most obvious reason is money. The revenues of these companies have slowed down. Google's parent company, Alphabet's profits were close to $16 billion in Q2FY22, down from $18.5 billion during the same period a year earlier. Facebook's parent company, Meta, reported its first-ever yearly decline in revenue for the second quarter, announcing a 1% decline to $28.8 billion.

The second reason is that, as there is inflation and rate hikes, companies will have to spend more than before. Hence, to avoid expenses, recruitments are avoided. According to a survey by ManpowerGroup, the shortage of skilled workers in tech companies around the world has reached a 16-year high.

Top IT and tech firms like Wipro, Infosys and Tech Mahindra have reportedly revoked offer letters given to students after delaying their joinings by nearly three-four months. According to reports, hundreds of freshers were given offer letters but first the joining of those candidates were postponed and finally, their offer letter was revoked. According to experts, the Indian IT industry might witness more of such scenarios in the future. Meanwhile, Naukri.com has reported a 10% de-growth in the IT sector's hiring activities recorded in August. Indian IT companies hired in huge numbers during the pandemic, but have now gone slow and cautious.

No doubt a recession will affect these industries to some extent, but individuals related to them are unlikely to suffer like others. Let's consider the Computer and Information technology sector. This domain has generated multiple jobs offline and online for individuals in the past. So we can say it is the most reliable domain if you have the right skills (in-demand skill set).

During the COVID-19 period, the IT sector is the only domain that has generated the possibility of remote working on a significant scale. Many people lost their jobs during the COVID or eventually switched their professional domains. They are able to explore the online opportunities, and after that several individuals leave their in-office full-time jobs and begin working from home. When the recession hits, the growth in the IT sector may slow down, but the long-term outlook is positive.

In spite of tech giants laying off their employees, this economic downturn will not impact much as many companies are executing projects with their Indian telecom clients, according to staffing firms. Amid a rise of jobs in the technology sector, frontend, data science, artificial intelligence and DevOps are the highest paying tech sectors in India, revealed Instahyre's State of Tech Talent Report 2022. Streaming and OTT platforms pay the highest salaries for senior frontend talent (10+ years experience), followed by internet-based product companies for mid-level (6-10 years experience), and the food tech sector for junior level (2-5 years experience), it added.

E-commerce brands pay the highest senior-level salaries for backend tech, fintech pays most for data scientists, and quick commerce brands try to attract the best app development and management senior talent with the highest salaries, the survey added. There is a lot of demand for roles in Blockchain, Artificial Intelligence, Virtual Reality, NFTs, Cyber Security, AR/VR, etc. Big tech companies of the country are constantly striving to grow by using technology and by enhancing experiences across segments, right from shopping and banking to employee engagement. There are around 300 gaming companies that will be launching into the VR world this year.

With the rollout of 5G services in the telecom sector, there is still a lot of demand for engineers which includes both software and application developers. Indian telcos like Reliance Jio, Bharti Airtel and Vodafone Idea (Vi) have been hiring engineers and software and application developers in droves over the last two years for their 5G services rollout, which should more than offset any potential impact from the layoffs.

According to Sachin Alug, chief executive of staffing firm NLB Services, "Regardless of team size, most tech companies will honour contracts and, hence, workflow/support to telcos won't be affected. The hiring of specialists and experienced professionals in the telecom sector will increase in the coming quarters, since the telcos have already acquired 5G spectrum and they would want to go into the market with new services and offerings around 5G."

Furthermore, the hiring and skilling of the workforce in technical profiles has helped Indian telcos save up to 30% on vendor cost. These profiles include developers, embedded engineers (those who have expertise across two or more areas of engineering), data scientists, data analysts and security experts.

The fourth industrial revolution is happening. Tech talent trends show that new technologies like Internet of Things (IoT), cyber security, blockchain technology, and metaverse development are growing at an unprecedented rate. This is true for both: candidates and recruiters and talent acquisition leaders, across business verticals. As technology pervades businesses, new roles and specializations such as Web 3.0, cyber security and quality assurance, gaming developers, AR and VR platform integration coders, and computer vision technologists are poised to storm India's tech talent recruitment strategies.

Similarly, Machine Learning (ML) skills and programming Artificial Intelligence (AI), are very much in demand. Cyber security experts trained in ML come with the ability to recognize and act on cyber threats. According to a report, "AI is likely to eliminate nearly 2 million jobs by this year, but it will, at the same time, create about 2.5 million others. The best candidates for ML cyber security jobs should have strong mathematics skills and an interest in puzzles. There are plenty of online and traditional educational programs to acquire ML skills."

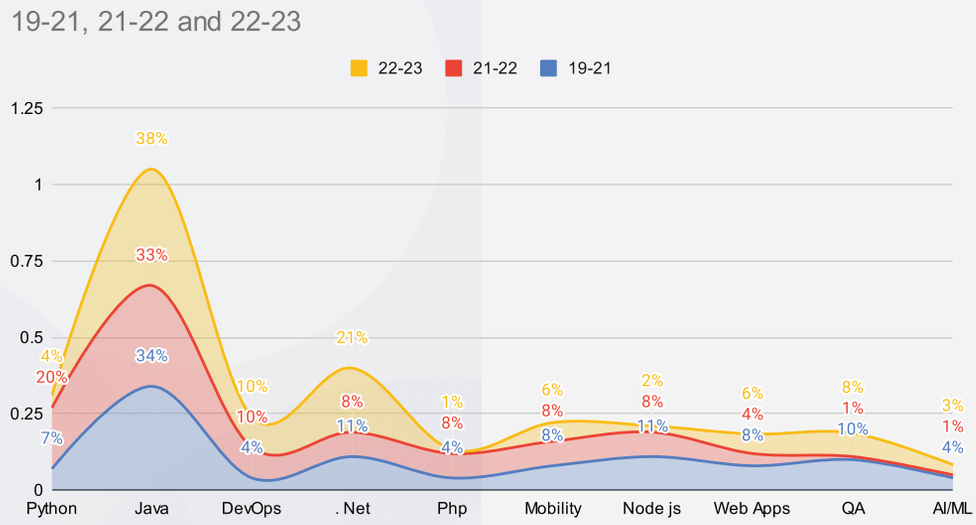
Project management is not just restricted to tech companies but is also an important part when it comes to developing digital projects and services. The understanding and knowledge of a variety of methodologies, such as Agile and Scrum will add value to a talent's portfolio.

Munira Loliwala, business head at staffing firm TeamLease, stated, "There are two things at play. One, the telcos have already built a workforce to cater to their tech needs, cutting down vendor costs in the process, and second, having their own captive workforce ensures that their dependence on vendors to complete projects has reduced. When clients start building their own workforce for a specific profile, the vendors providing those services also pull back on their employment as the number of professionals required for such projects is small. Most of this workforce is employed on a permanent basis, with an average life cycle of two-five years."

In short, the demand for a skilled workforce will never cease to exist, even during an economic downturn. Hence it is imperative for the talents to upskill and ensure that they possess industry-relevant skills to keep themselves employable at all times. The economic slowdown is in tech and foreign investments in startup companies. India's growth is intact and the non-tech sector is booming.

Variable 4: Tech Stack in Demand

According to a survey of 1000+ companies conducted by BridgeLabz Solutions, the top three tech stacks that continue to dominate in both pre-covid and post-covid eras are as follows:



Tech Stack in demand as per survey of 1000+ companies
Source: Internal

Python was in demand in both 2020 and 2021 owing to the surge in digitalization. However, the year 2022 witnessed a surge in demand for Java. Since the non-tech sectors continue to hire and look for digital talent in bulk, the demand from non-tech sectors also explains the need for more basic "Java" tech skills as they are starting from scratch.

Variable 5: Adoption of hybrid working style

With the end of the pandemic, companies are urging their employees to return to work. There are some companies that have resumed 100% operations, but there are still many of them that are considering a hybrid mode of working. According to a survey by Colliers India, a real estate consultant, "Hybrid working is here to stay as about 63 percent of corporates are currently embracing the flexible model."

Furthermore, the survey revealed that three days a week in the office is the most popular and preferred hybrid working style for India Inc, with 26% of the organizations preferring the same. The survey indicated that this hybrid pattern enables businesses to pursue business goals without hindrances while offering better work-life balance to employees.

According to a recent survey by people supply chain company TeamLease, "58% of responding organisations from industries ranging from technology to manufacturing to BFSI to FMCG to retail to health to automobile, believe that 2022 is the year offices will become completely in-office. Only about 5% of respondents said that they intend to stay in a virtual-only organization for the foreseeable future."

"For most companies, the journey to move from being 100% in office to 100% virtual has been reasonably smooth. The fact that this lasted for a long time and many believed work forever could be in this model. However, most underestimated that coming to work is not just about doing work," Nitin Sethi, Chief Executive Officer, Human Capital Solutions at global professional services firm Aon (India & South Asia).

The TeamLease survey found that although 43.46% of HR leaders conceded that their employees want to return to work, 76.78% of organizations want to give their employees the preference to choose their work model. Also, 36.61% of respondents claimed they had office space on lease pre-pandemic but moved to co-working spaces afterward.

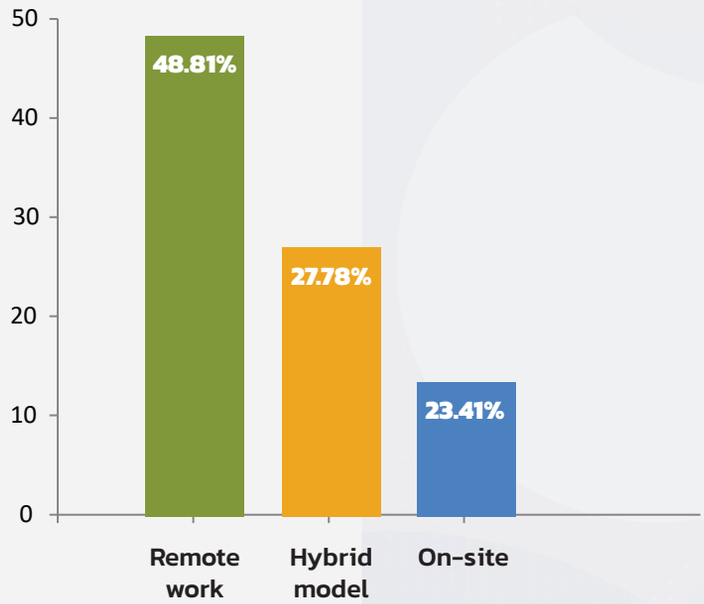
There are many organizations in India that are exploring the hybrid model of work, whereby employees can work from home on certain days and from the office on others. Each tech company has its own rules and protocols when it comes to working from the office.

While there are many companies following the hybrid style of working, there are others that are still in remote mode of working. With our life getting back to normal, there is still one huge overhang that refuses to go; it is called remote working. Companies are trying their best to get the employees to report to the office regularly. Tata Consultancy Services (TCS) is referring employees to in-house doctors if workers seek to work from home on medical grounds. The IT company is asking such employees to get the diagnosis, treatment and medical certificates validated by a company-empanelled medical team to decide if work from home is applicable, according to a Times of India report. "We have been encouraging our associates to return to offices for some days in a week. A significant number of our employees are already doing so," TCS reportedly said in a statement.

What started as a necessity has now become standard for many companies. Employees are finding working remotely a rather smooth process these days especially with tech tools like web conferencing bridging the game between home and office.

According to a survey conducted with 1000+ working professionals by BridgeLabz Solutions, 48.81% wanted to continue working remotely, 27.78% preferred the hybrid model, and 23.41% preferred working from the office. This shows a shift in the preferred mode of working.

Preferred working model



Survey conducted with 1000+ working professionals by BridgeLabz Solutions
Source: Internal

Only about 9% of corporate India was working fully remotely as of August 2022 compared with 38% in January, according to a survey conducted by HR Solutions Company Aon. The survey also showed that an imminent return to office triggered high attrition. Attrition for companies that announced a return to office in the next few months stood at 29% in August compared with 19% each for those working virtually and those who are back to office in a hybrid mode.

Variable 6: High demand in non-tech sector triggers attrition in tech sector

There are also numerous opportunities for digital talent in non-IT companies such as global capability centres (GCCs), research and development (R&D) units, and companies in other sectors that are moving online. For instance, British retail giant Tesco plans to hire over 1,000 people, mostly in digital skills, in the next one year for its technology centres in Bengaluru. The hiring will be across various profiles like software engineers, system engineers, data scientists, product managers, architects, and digital transformation and robotic process automation (RPA) experts.

The roles of senior technology leaders like chief information officers (CIOs) and chief technology officers (CTOs) have also expanded in modern enterprises. Analysts say non-IT sectors are still looking for tech talent as they continue migrating or updating to a technology platform.

The IT industry contributed 57 percent to overall job openings so far this year, compared to 82 percent in the last year, as per TeamLease Digital." As the hiring demand has seen a slowdown in the IT sector, high attrition rates continue to impact the information technology services sector," says Siva Prasad Nanduri, Chief Business Officer, TeamLease Digital.

However, he offers a silver lining, saying both attrition and net job additions should stabilise, going forward. "IT companies are headed towards lower attrition in the upcoming quarter as fears of global recession and waves of layoffs are expected to have a subdued effect on the attrition levels," said Nanduri. "In the current macroeconomic situation, compensation expectations of new hires will be becoming more realistic."

Net employee addition by the top IT service providers has dropped by about one-fourth in the first two quarters of the current fiscal year and is expected to fall by almost half for the full year as the next two quarters are historically weak for the $227 billion software exports industry.

This comes as the sector is facing geopolitical turmoil in Europe and macroeconomic concerns in the United States.

However, experts suggest that the shift in demand environment will not mean a hiring freeze and that companies will still continue to invest in talent, albeit with caution. The recession is impacting the tech industry as a lot of foreign investment going into product startups is now tapering off. However India's consumption story is intact and hence non-tech sectors continue to hire and look for digital talent. This explains the mass exodus of tech talent from tech sectors to non-tech or MNCs.

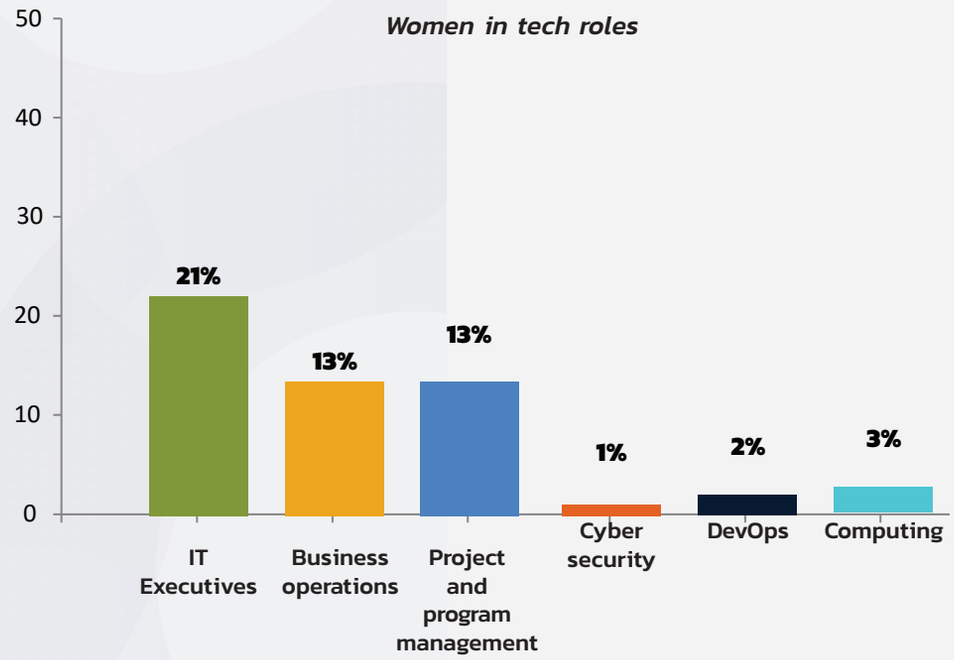
There is an increasing growth in the non-tech sector which has led to the inclusion of lateral talent. Due to the economic slowdown, companies are investing their resources in reskilling their existing lateral talent and are not focusing on hiring freshers as of now.

Supply Variables

Variable 1: Tap Women and Tier 2 Cities Talent

The participation of women in tech is quite low as compared to any other stream. According to the Unesco's State of Education in India 2022 report focusing on artificial intelligence in education, "85% of adolescent girls in the country don't have a laptop at home, and 83% got less than an hour at their school computer labs per week."

Overall, women in technology are underrepresented in eye-opening numbers. Ranking highest on the list by survey respondents are roles such as IT executives (21%), business operations (13%), and project and program management (13%), but far fewer are in cybersecurity (1%), DevOps (2%), and cloud computing (3%).

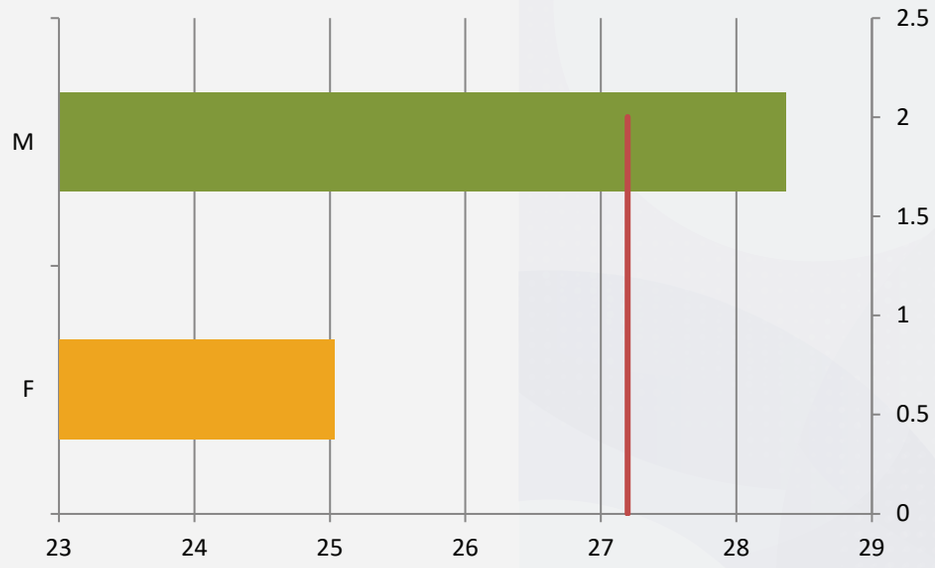


Source: External PeopleMatters.in

Interestingly, 79% of women are employed in tech roles in non-tech companies. IT services are the largest reported industry overall, with a 21% women population. This gap in women employees versus male employees is evident at leadership levels — 66% of women surveyed say that men outnumber them in their organization for leadership roles at ratios of 2-to-1 or more.

Highly educated and experienced women reach the mid-management level and often take a break from their jobs. There are many reasons behind these career breaks right from marriage, childbirth, caring for ailing parents, and others. These women find it difficult to return to work after the gap in their careers simply because of the ever-changing technology changes and the skill gap that arises due to this break.

Men Vs Women BTEQ Scores



BTEQ survey conducted with more than 20,000 engineering graduates Source: Internal

According to the BTEQ survey conducted with more than 20,000 engineering graduates from varied streams across India revealed that the average score of women was 27% as against 31% men in 2020. This increased to 40% as against 39% men in 2021 which means women were more prepared and ready to be employed as compared to men. However, in 2022, the average score of women declined to 25% as against 28% for men. For the first time in three years, the scores of women have come down. This could be because of the adoption of hybrid mode of learning.

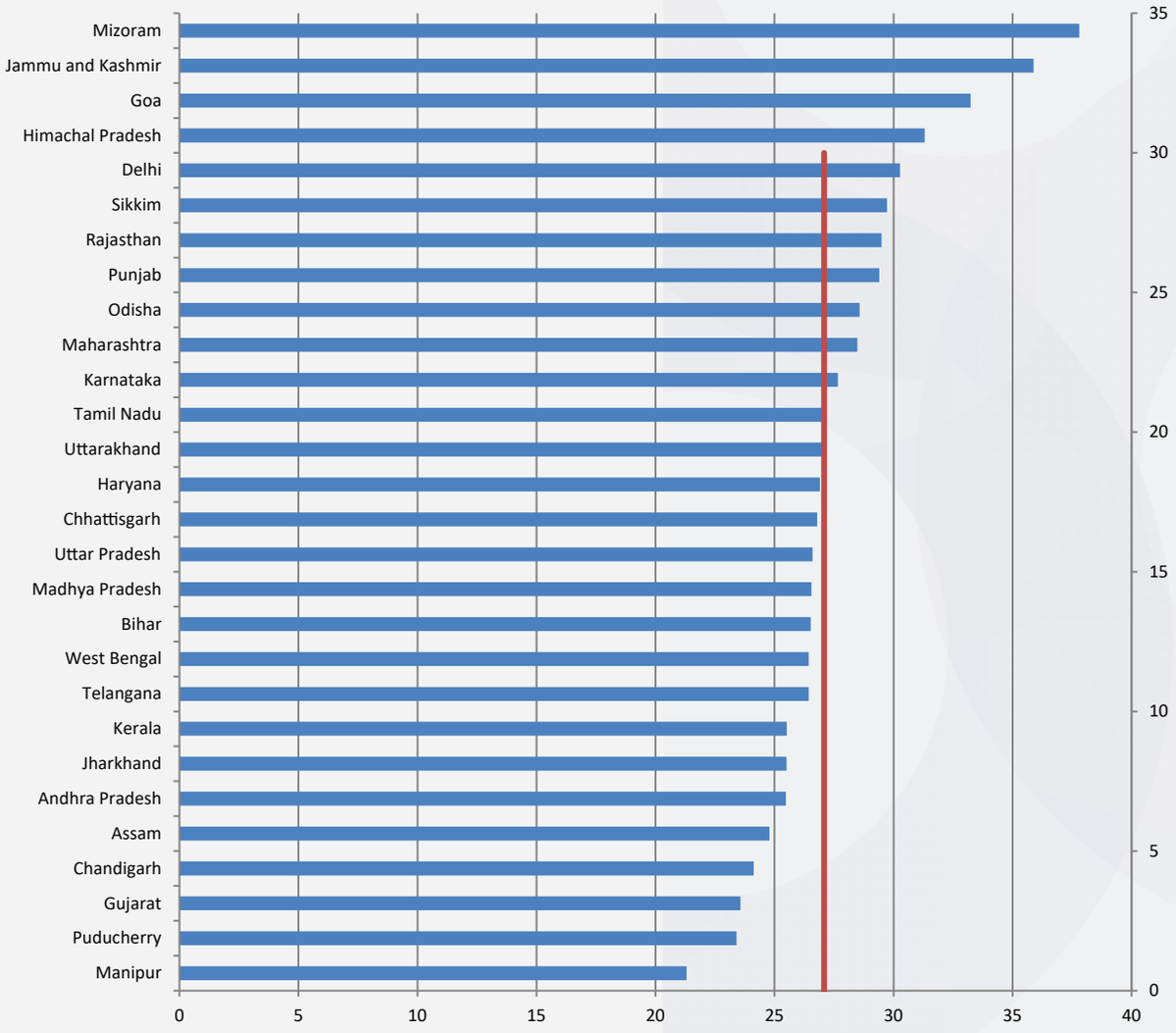
But how to create a gender-represented and equitable workforce? It's important to understand women employees' needs, wants, and aspirations. According to a recent poll, 52% of women working in core tech companies ranked professional development and training opportunities as one of the top five incentives from their organizations. This is compared to 42% working in non-tech companies.

Women are often treated as a 'reserve workforce' rather than an intrinsic part of the economy. The tech industry has always been male-dominated just like other sectors. Statistics say that in a crisis like COVID-19, job loss hits women harder and they find fewer open doors when they want to rejoin the workforce.

As of 2022, women hold 26.7% of technology jobs. Notably, compared to entry-level roles, roles higher up in the org chart (like CTOs or heads of engineering) have an even lower representation of women. As per the latest data, women hold just 26.7% of tech-related jobs. The total number of women in tech-related positions decreased by 2.1% from 2020 to 2021. Of a sample of 552,751 tech employees across 56 companies, only 141,038 employees are women.

Similarly, talent from lower tier cities and states have better employability scores than those from metro cities as per our survey. According to the BTEQ (BridgeLabz tech employability test quotient) survey; aimed to determine the readiness of the engineering talent for development jobs, conducted with more than 20,000 engineering graduates from varied streams across India revealed that Mizoram has around 37.8% of ready talent followed by Jammu & Kashmir with 35.88% and Goa with 33.23%. In 2021, Andhra Pradesh had 41% of ready talent followed by Assam with 32% and Bihar with 31%. The average score was 27% in 2020 which increased to 40% in 2021 and came back to 27% in 2022.

Statewise BTEQ Scores



Survey conducted with more than 20,000 engineering graduates from varied streams across India
Source: Internal

Variable 2: Fresher Vs Lateral Talent

The demand is reducing for tech based roles because of global cues and decreased foreign investments especially in startup companies. These segments were large hiring zones for freshers. Due to the economic slowdown, the startup companies have tapered down their hiring of fresh talent.

Also like last year, this year too many college pass-outs are directly impacted because of delays in the onboarding process of top IT firms. Over 30,000 graduates are still waiting for their joining letters from firms like Wipro, Infosys, Cognizant, Tech Mahindra, Capgemini, and others owing to global slowdown and overhiring in Fy22.

While the Indian information technology and business process management industry has grown gradually and steadily in recent years and was estimated to have over 4.8 million employees during the financial year 2022, But net headcount addition in Indian IT companies decelerated in the first quarter of the current fiscal (Q1 FY23) after accelerating for 7 quarters with Q3 FY22 being the only exception, as per a report by domestic brokerage and research firm Anand Rathi. Though, in Q2 FY23, Anand Rathi expects the net headcount addition to decrease further and normalise.

The non-tech sector continues to boom this year but does not have the bandwidth to hire or train freshers. Instead, they are choosing lateral talent. By hiring laterals, they cut down their costs and time of training as compared to the one invested in freshers. Since they are choosing the talent from the existing talent pool of 4.8 million IT professionals, the attrition rate has also been high as most Indian IT companies recorded 23-27% attrition in Q1 FY23.

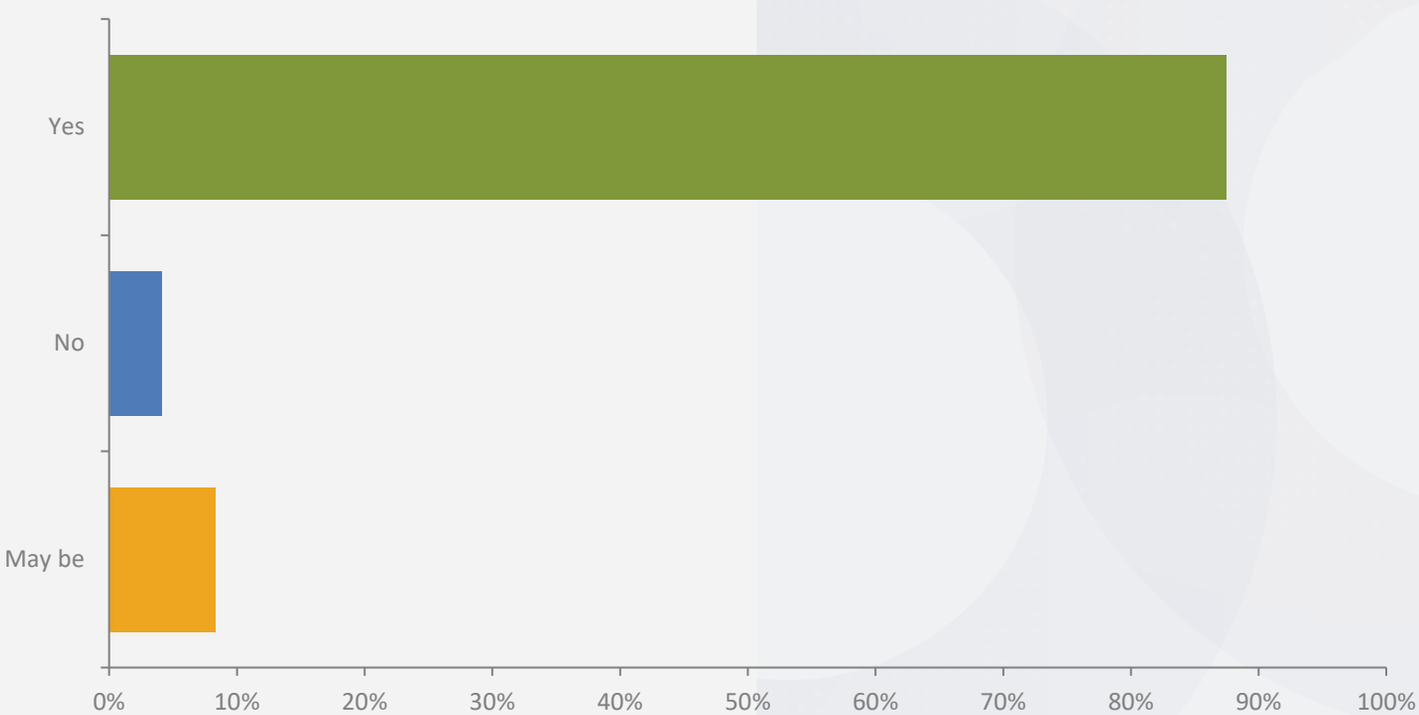
Solving Demand-Supply Deficit

A) Join hands with skill enhancement companies

The tech industry can solve this challenge only by joining hands with skilling companies. Research has revealed that only 10% of the total talent is available to be readily employed due to a lack of relevant skills and practical knowledge. Ideally, to solve this problem, freshers should be provided with industry-relevant practical training.

We have a lot of tech talent in the country with the tech knowledge and aptitude to perform well. But, freshers need not just skill training but also hand-holding in transitioning from a classroom to a professional working environment. The companies, thus, struggle in an attempt to assimilate them to fulfil these requirements.

Engineer's Confidence Index On Landing a Job After Completing Skill Enhancement Course



Survey Conducted by BridgeLabz with 1000+ Engineers Source: Internal

According to a survey conducted by BridgeLabz Solutions with 1000+ engineers, 85% were confident about getting a job after completing their skill enhancement course, and less than 10% were not so confident about the same. This shows that the engineers are open to learning new skills to improve their employability quotient.

The best form of skill enhancement program is the one that follows the Experiential learning method. This method has been practised in different sectors right from medicine, and technology to the law in different forms right from apprenticeships, to fieldwork, studying abroad, and clinical simulations. In this form of learning, as a learner, you need to reflect, analyze, and evaluate.

Experiential learning is an integration of theory and application where tech talent can put in the time to practice their skills and learn the nuances of the latest technologies. They can also become lead engineers who can guide young engineers and eventually become contributors.

This method of learning is widely accepted by many training centres and incubation labs. In the tech sector, the engineers enrol for fellowship programs or Bootcamps and get a chance to work on the latest technology under the guidance of mentors or experts in the field. Experiential learning is the future of learning because of the following advantages:

1. Active learning: Experiential learning engages the talent throughout the process and does not involve any 'mindless action activities.' Constant engagement makes it easy to understand and learn the nuances of coding and programming. For example, peer teaching is an activity that is conducted during this type of learning. By teaching other students, the talent transfers his/her knowledge and gets a basic insight into how clear his concepts are.

2. Structured program: Experiential learning follows a structured program so that the talent can learn in a systematic way for a better understanding.

3. Engaging: Experiential learning believes not just in being active during the learning process but also in staying engaged. This method encourages the talent to question, analyze, and seek solutions throughout the session. As a result, the learning process is interactive, interesting, and simplified. Also, it involves practical work and so the talent stays focused throughout.

4. Ability to multitask: It also helps in promoting the ability to multitask. A talent is trained in a way that he/she can work on two different technologies simultaneously. This method of learning gives the talent the benefit of ownership of the results as they are closely involved in the problem-solving activity. Also, it helps improve their thinking ability to a large extent. Constant feedback helps improve gradually.

5. Meaningful: This method teaches the talent what is relevant. It equips talent with industry-relevant skills. Also, experiential learning prioritises quality over quantity. It lets the talent specialise in certain technologies and master them completely so as to efficiently put them to use.

6. Personalized: The tech talent gets a chance to interact and get trained by experts in the field. In this way, they can learn concepts at your pace through regular practice. Also, the mentors help in clearing any roadblocks that he/she may hit along the way.

7. Success is inevitable: With constant problem-solving, feedback, and practice sessions, the roadmap to success is obvious and very clear in this type of learning.

8. Ability to apply the knowledge immediately: In this type of learning, the talent can apply what is learned immediately. This helps in giving a clear introspection of how much the talent has learned and how much he/she needs to improve.

The experiential method of learning is widely accepted by many top tech companies, start-ups, and incubation labs like BridgeLabz Solutions. The combination of experiential learning and technology is a step taken toward safeguarding today's learners to succeed in an uncertain future.

B) Increasing the talent pool

Increasing the talent pool is the right way to overcome the supply-demand deficit. So, how do we do that? Here are some ways to consider:

1. Tap fresher or low-experience talent: There is a huge volume of fresher talent and also those with one to three years of experience in tech. If we offer skill-enhancement programs to these talents, then the talent pool will increase.

2. Convert non-tech to tech: There is an exodus of talent that has deviated from tech to non-tech jobs in the past due to the non-availability of relevant jobs or owing to salaries not matching their expectations. Turning such talent back into tech will help in easing the situation to a large extent. The tech space is cringing for talent with relevant skills, however, there has been a surge in students from non-tech backgrounds opting for tech jobs in the last few years. Often coding and programming have been limited to engineers belonging to computer science backgrounds. However, this scenario has undergone an immense change in recent years. There is a huge volume of the workforce who started off as engineering talent but took up non-tech jobs. Many of them want to come back to a tech career and can be groomed to have a great career in tech. The non-tech lateral talent can be groomed through experiential learning by offering the 'right environment and right guidance'. There are many tech companies that are already planning to hire non-engineers (those from Information Technology, BSc, or Mechanical background) for their processes to address the ongoing attrition problem.

3. Hiring women tech talent: Women in technology are underrepresented in eye-opening numbers. Ranking highest on the list by survey respondents are roles such as IT executives (21%), business operations (13%), and project and program management (13%), but far fewer are in cybersecurity (1%), DevOps (2%), and cloud computing (3%). Interestingly, 79% of women are employed in tech roles in non-tech companies. IT services are the largest reported industry overall, with a 21% women population. This gap in women employees versus male employees is evident at leadership levels — 66% of women surveyed say that men outnumber them in their organization for leadership roles at ratios of 2-to-1 or more.

Women join engineering out of a passion for coding and with an aspiration to soar high in their careers. However, due to many reasons, most of them are forced to take a career break. Women need the right support and platform to showcase their talent.

Women in the tech sector are open to reskilling and upskilling in an attempt to restart their careers. According to the World Bank, "If all women engaged in domestic duties who are willing to work had a job, the female labor force participation rate would increase by about 20 percentage points in India."

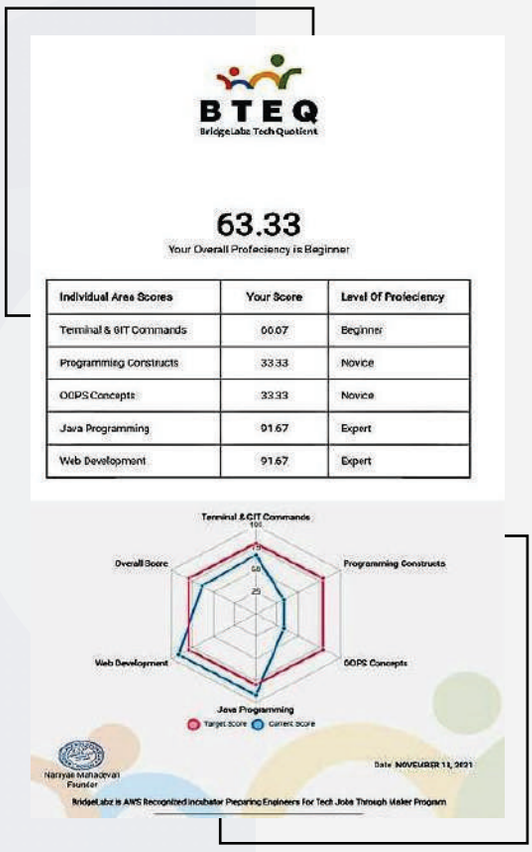
4. Including lateral talent: Experience is granular, the industry looks at 0-3 years largely as entry-level talent or as freshers. The ones with more than 3 years of experience are seen as laterals. Also, please note that it is not just the years of experience that matter, but it depends on what they have been doing in these years. The depth of IT / development experience is crucial to getting a job. The first three years after graduation are quite important. One needs to focus on getting into core development jobs backed by an experiential learning approach for a strong foothold in the industry.

Experienced professionals should also be encouraged to upskill to stay abreast with the ever-evolving technologies. There are several lateral skill enhancement programs to offer an in-depth understanding of the concepts and sufficient knowledge across domains. This will help fill the skill gaps and enable the talent to apply their knowledge to practicality which makes them productive at work. It will also aid his/her career growth.

Introducing BTEQ

While the number of graduates is increasing with each passing year, most of the graduates possess only theoretical knowledge of the technologies. They do not have the experience of actually working on the technologies. Besides, the technologies are also evolving at a rapid pace. So, by the time the talent completes his/her engineering, the knowledge and aptitude possessed by the talent are outdated and irrelevant. So, the talent finds it difficult to find jobs as he/she does not fulfil the expectations of the companies.

To help the fresh graduates feel confident about their employability, BridgeLabz Solutions has launched BridgeLabz Tech Employability Quotient (BTEQ) with an aim to solve this employability issue. It is a score that determines the likelihood of getting a development job and lets the talent assess their true potential to get a chance to gain a 100% job guarantee and employability with BridgeLabz. The BTEQ test is conducted on a daily basis and the results are announced every week.



BTEQ score report for representation purposes only

Areas and Competencies of BTEQ

The tech companies are willing to recruit fresh talent provided they have tech proficiency. BridgeLabz tech experts have over two decades of experience in the tech space and having said that, BridgeLabz has distilled tech proficiency into five major areas which we know organizations look for in talent and which is the basic requirement for hiring. BridgeLabz Tech Quotient (BTEQ) score will highlight the talent and his/her readiness to be interviewed and join a job.

Here are the five areas and competencies the talent is tested on in the BTEQ test:

1. Terminal and GIT Command: Linux environment and terminal commands are quite crucial to achieve tech competency. So, under this category, the talent's knowledge of the Linux environment is tested.

2. Programming Constructs: Writing programs using simple statements, conditions, loops and functions using Shell Scripts will be judged under this category. Besides these, the talent's ability to use Data structures like Arrays and Dictionaries will also be scrutinised.

3. OOPS Concepts: OOPS Concepts play an important role when it comes to designing and developing applications. So, under this category, the talent's proficiency in using OOPS Concepts will be considered.

4. Java Programming: This category determines the talent's current level of hands-on experience in coding using object-oriented programming languages like Java.

5. Web Development: This deals with the talent's exposure to web components, understanding of various components of a web application like web server, web client, HTML, HTTP, URL, form parameters, data exchange between the client and server, status coders, etc. Also, it also deals with the talent's understanding level of dynamic web pages and static HTML pages. It also analyzes how the talent manages to develop simple web applications using Tomcat and servlet.

Based on the above-mentioned areas and competencies, the scores of talents are determined, and based on the scores, the talent is categorised as a novice, beginner or expert.

Here is the score and the corresponding meaning for the same:

Novice: When a talent scores between 0 to 49%, he/she qualifies as a novice. This means that the talent is weak in most concepts and needs a lot of guidance to get proficient.

Beginner: When the talent scores between 50 to 70%, he/she qualifies as a beginner. This means that the talent knows some of the concepts, but needs work to get proficient.

Expert: When the talent scores more than 80%, he or she achieves the expert level. This means that the person is quite adept at what is needed with regards to basic tech competency by most organizations

Conclusion

In a nutshell, due to the growing number of online platforms and digitally driven businesses, the demand for full-stack developers has been on the rise in recent years. In short, the dependency on digital platforms is only increasing with time.

Technology is evolving at such a rapid pace that the new trends seem out-of-date before they even go live. Every year the demand for technology changes. The skill gap between what the talent has learnt and what is expected by the companies still exists.

With an economic downturn looming large in the West, the investments in startups have seen a dip leading to fewer opportunities in the tech sector. However, the non-tech sectors continue to hire and look for digital talent. This explains the mass exodus of tech talent from tech sectors to non-tech or MNCs. Since the non-tech sector is hiring, there is a need for more experienced or lateral talent which has brought down the hiring of freshers.

Companies are switching from remote mode to hybrid or physical mode of working. Companies are witnessing higher attrition levels due to the numerous opportunities that are available with other non-tech sectors like manufacturing, and likewise.

Talent across geographies are getting the opportunity to work for leading companies. According to the BTEQ (BridgeLabz tech employability test quotient) survey; aimed to determine the readiness of the engineering talent for development jobs, conducted with more than 20,000 engineering graduates from varied streams across India revealed that Chandigarh has 21% of ready talent followed by Sikkim with 17% and Himachal Pradesh with 14%. The analysis shows that 75% of the talent is from Tier 2 cities. The survey also revealed that the average score of women was 42% as against 39% men in 2021 which means women were more prepared and ready to be employed as compared to men. In 2022, the average score of women as against men.

The lateral talent is again more in demand as a lot of low level tech talent can be upskilled or reskilled. Talent with an experience of 0-3 yrs is the focus. Every year around 1.5 million engineers graduate, out of which 50% take up low tech jobs. As a result, there are around 2-3 million lateral talents waiting to be taken to deep tech jobs.

Experienced professionals should be encouraged to upskill to stay abreast with the ever-evolving technologies. There are several lateral skill enhancement programs to offer an in-depth understanding of the concepts and sufficient knowledge across domains. The tech talent must opt for skill enhancement programs to improve their employability.

The tech industry can solve this employability challenge only by joining hands with skilling companies. When the talent has the right skill set and is job-ready, he/she will be productive at work from day one and will have an edge over the others while searching for jobs.

In short, the demand for a skilled workforce will never cease to exist, even during an economic downturn. Hence it is imperative for the talents to upskill and ensure that they possess industry-relevant skills to keep themselves employable at all times.

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1st Floor, Malhotra Chambers, Deonar, Govandi East, Mumbai - 400088

www.bridgelabz.com

contactus@bridgelabz.com