Unveiling the potential and scope of the Online Skill Gaming Industry:

Study with technology students and professionals

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Supported by EGF E-GAMING FEDERATION

Introduction

The Online Skill Gaming Industry in India is an unfolding success story, marked by rapid growth and immense potential. As a sunrise sector, it has captured the nation's imagination, poised to lead the global gaming industry with its large and tech-savvy population, providing a competitive edge.

The industry's expansion has become a driving force behind India's economic growth, creating numerous employment opportunities and attracting tech talent from diverse domains.

Projections indicate a staggering growth trajectory, with India's gaming market expected to soar from $2.8 billion in 2022 to $5 billion by 2025, growing at a compounded annual growth rate (CAGR) of 28-30 percent. The gaming industry's meteoric rise between 2017 and 2020, is currently expanding at a CAGR of 38 percent.

At the heart of the industry's allure lies its commitment to innovation. Embracing advanced technologies like AI/ML and VR, it positions itself as a frontrunner in technological advancements. A study by NASSCOM released at the beginning of this decade, foresaw **global spending on engineering R&D (ER&D) to reach $2 trillion by 2030, with $500 billion contributed by digital engineering services. India's potential to become the 'innovation hub for the world' is within grasp if investments in its people align with the rising demand.**

The world is excited about gaming and the complex engineering and data science skills associated with it

Responsible for delivering great skill gaming experiences, complex engineering and data science skills excite the world due to multiple reasons. They are:

Early adopter of new technologies:
Gaming has always been an early adopter of new technologies like AR/VR, Metaverse, Blockchain etc, thereby pushing innovation.

Artificial Intelligence (AI):
AI is crucial in skill gaming to provide intelligent and challenging opponents, to create personalized experiences, and to optimize game difficulty based on player performance.

Data Analytics:
Data science plays a significant role in skill gaming, analyzing player behavior, preferences, and performance to improve game design and tailor experiences to individual players.

Real-Time Systems:
Skill gaming often involves real-time interactions, requiring complex engineering for server infrastructure and minimising latency for smooth gameplay.

Security and Fairness:
Online skill gaming platforms must ensure security and fairness. Complex engineering is required to implement encryption, anti-cheat systems, and fraud prevention measures.

Cloud Computing and Scalability:
Experiences within skill gaming need to handle high loads of players simultaneously. Engineers build the infrastructure for large-scale data storage, player accounts, in-game transactions, and communication between players and servers. Cloud computing expertise ensures scalability and performance.

The Survey

This survey delves into the increasing appeal of the online gaming industry within the tech community, captivating the interest of both students and professionals alike.

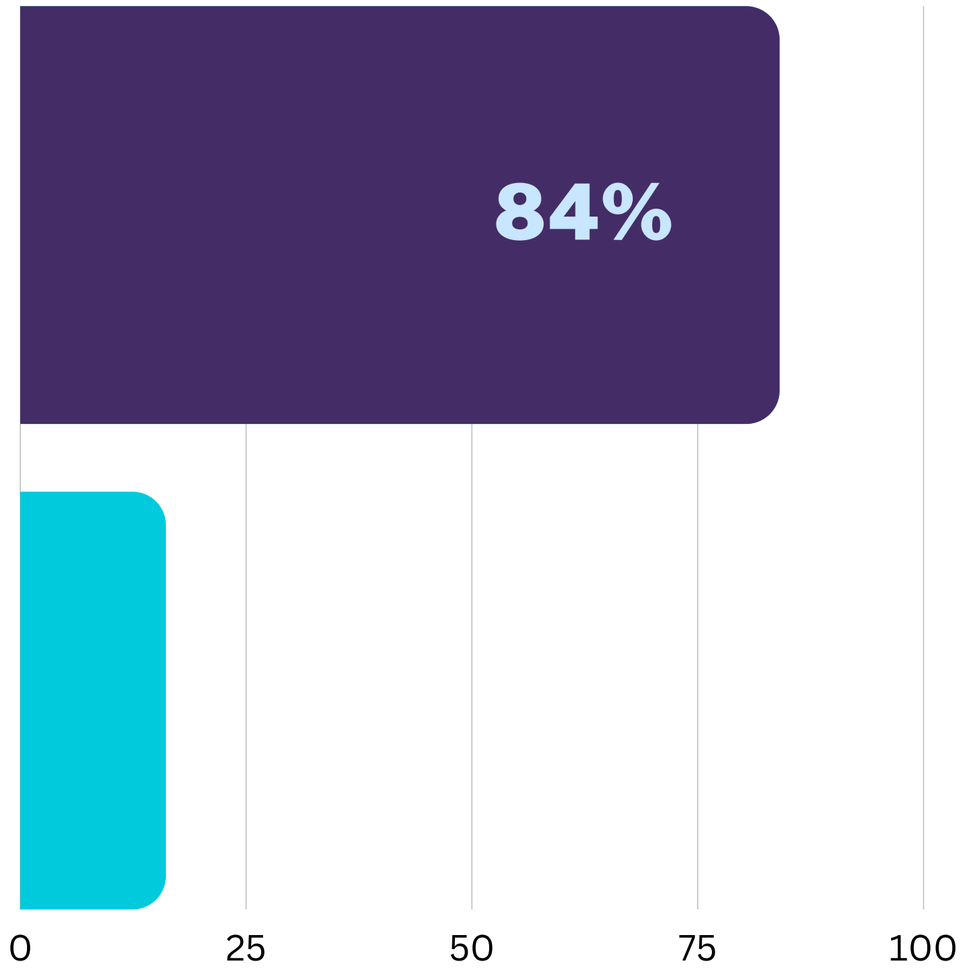
Participants: Sample set

The survey covered 4644 individuals across 5 states: Andhra Pradesh, Telangana, Kerala, Karnataka, and Tamil Nadu, with each state sampled roughly equally. The respondents comprised two-thirds males and one-third females, primarily aged between 19 and 50, with 39% being students and the remaining professionals.

Key areas of focus:

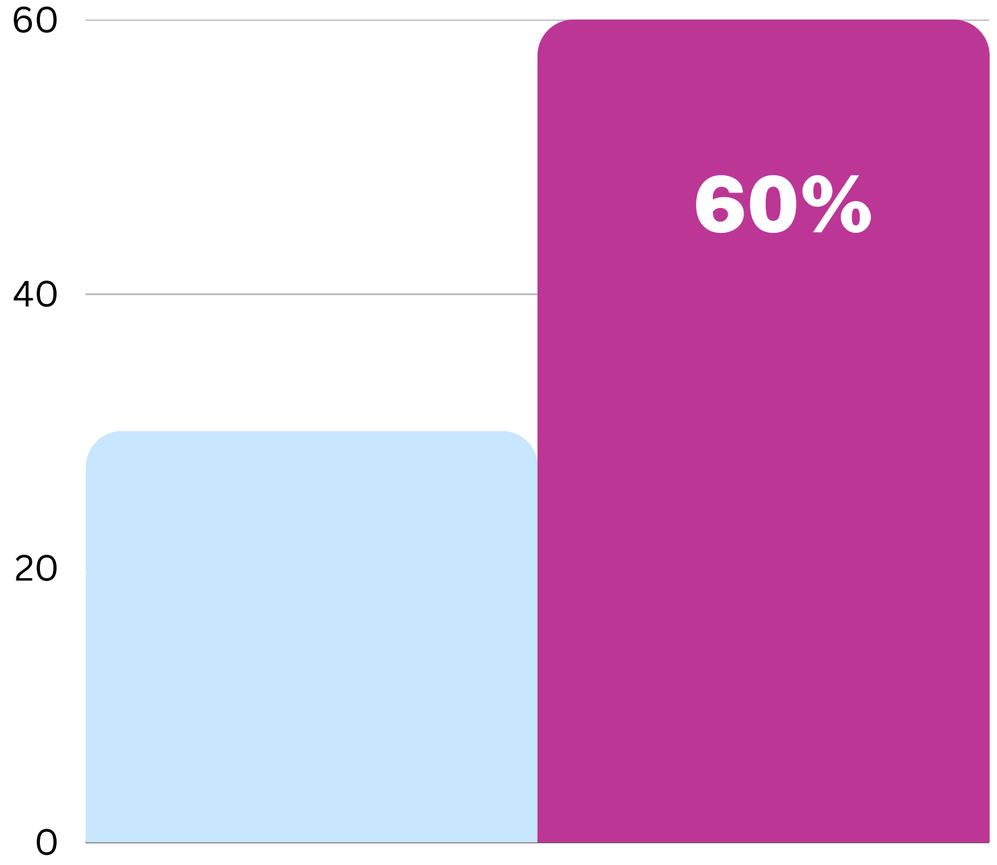
- The attractiveness of the online skill gaming sector for highly skilled engineers
- The role of the online skill gaming sector in leading the next software revolution in India
- Preferred technology areas for careers in the gaming sector
- Opportunity to create/ develop world-class product in India/ gaming
- Interest in pursuing professional education in the gaming sector
- Appropriateness of current courses/education related to Data Science and AI for the gaming industry

84% of respondents believe that India has the potential to lead the global gaming industry

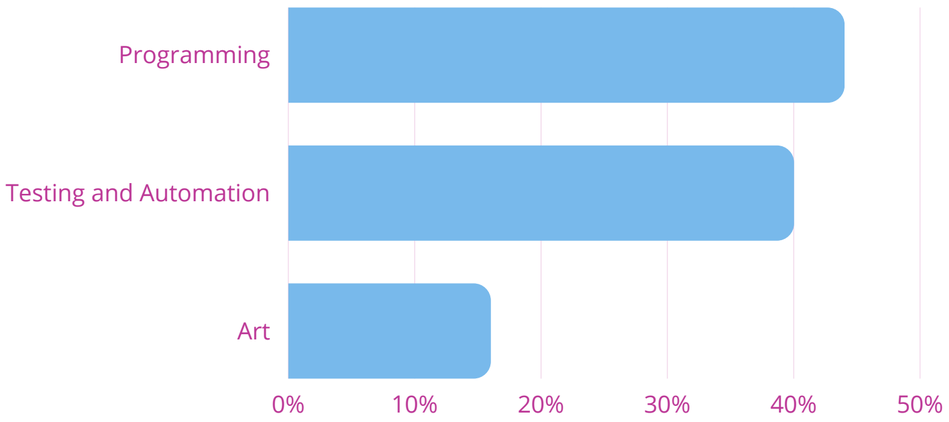


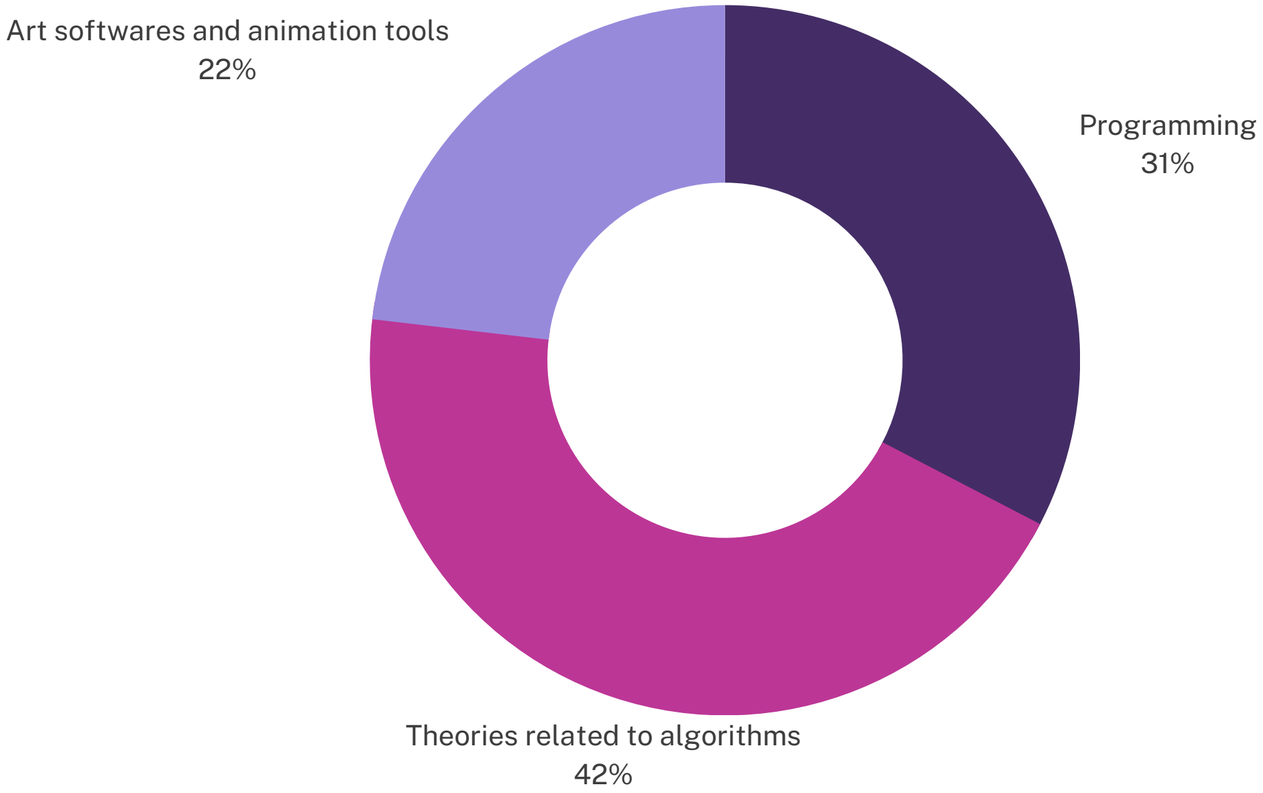
Showcasing their confidence in the country's gaming capabilities

A significant 60% of the respondents believe that if given a chance to create for the world in India, online gaming will reduce the flight of talent from the country to overseas destinations



Respondents showed a diverse range of interests and aspirations in technology areas related to online gaming



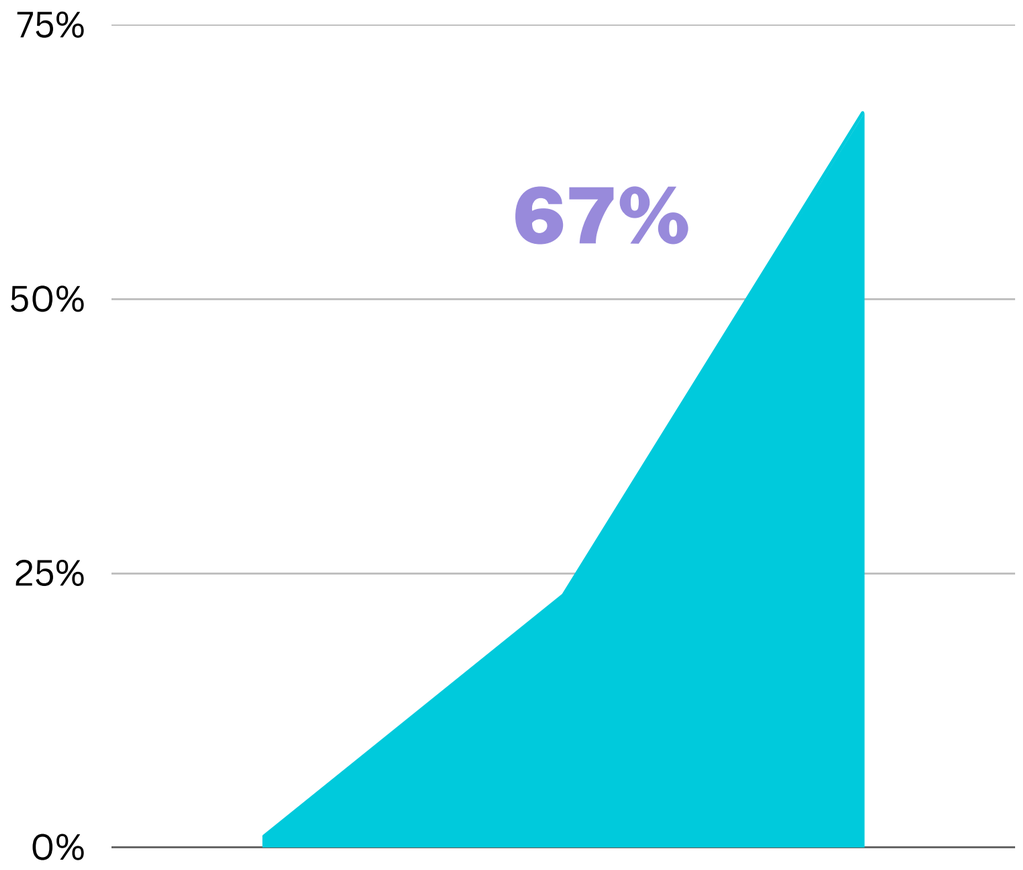


The three areas of interest within online gaming included Programming (44%), Testing and Automation (40%), and Art (16%)

Within online skill gaming interest ranged from art Softwares and animation tools (22%), Programming (31%), and Theories related to algorithms (42%)

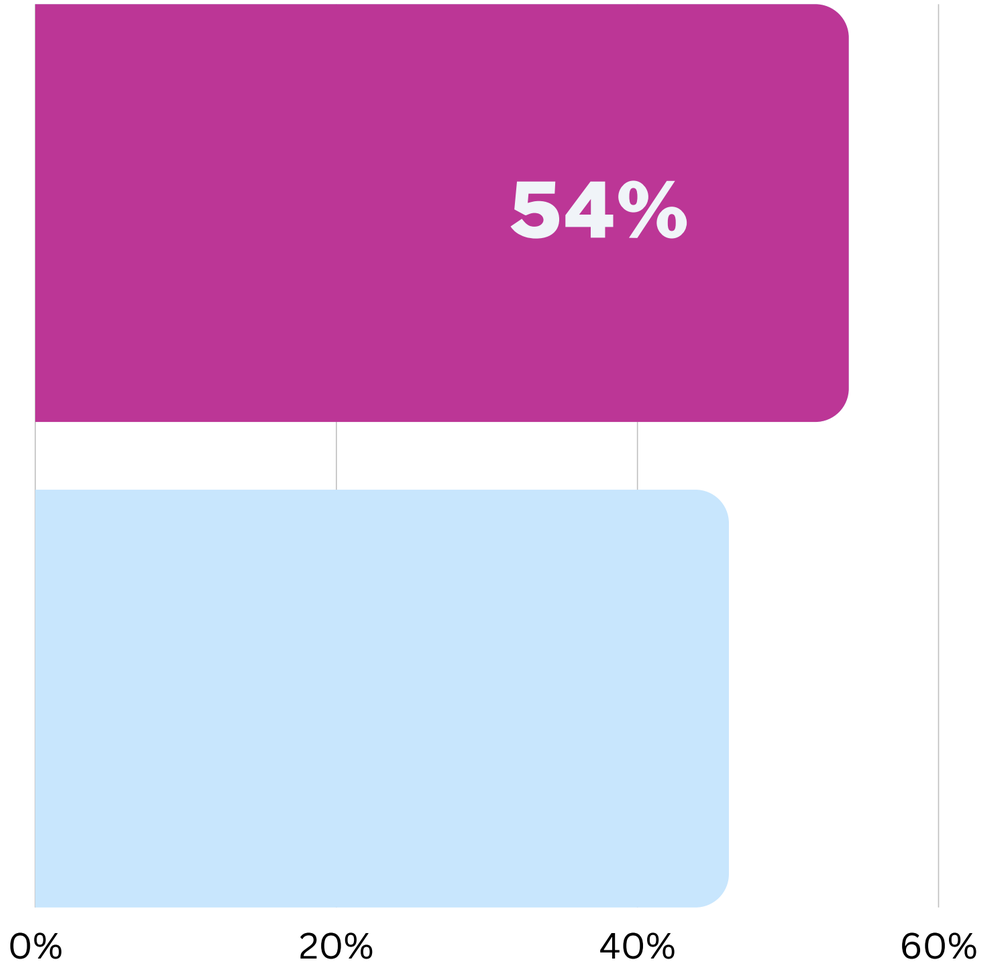
Around 67% of respondents showed willingness* to pursue professional education in the gaming sector

(rated 4 or 5 out of 5)

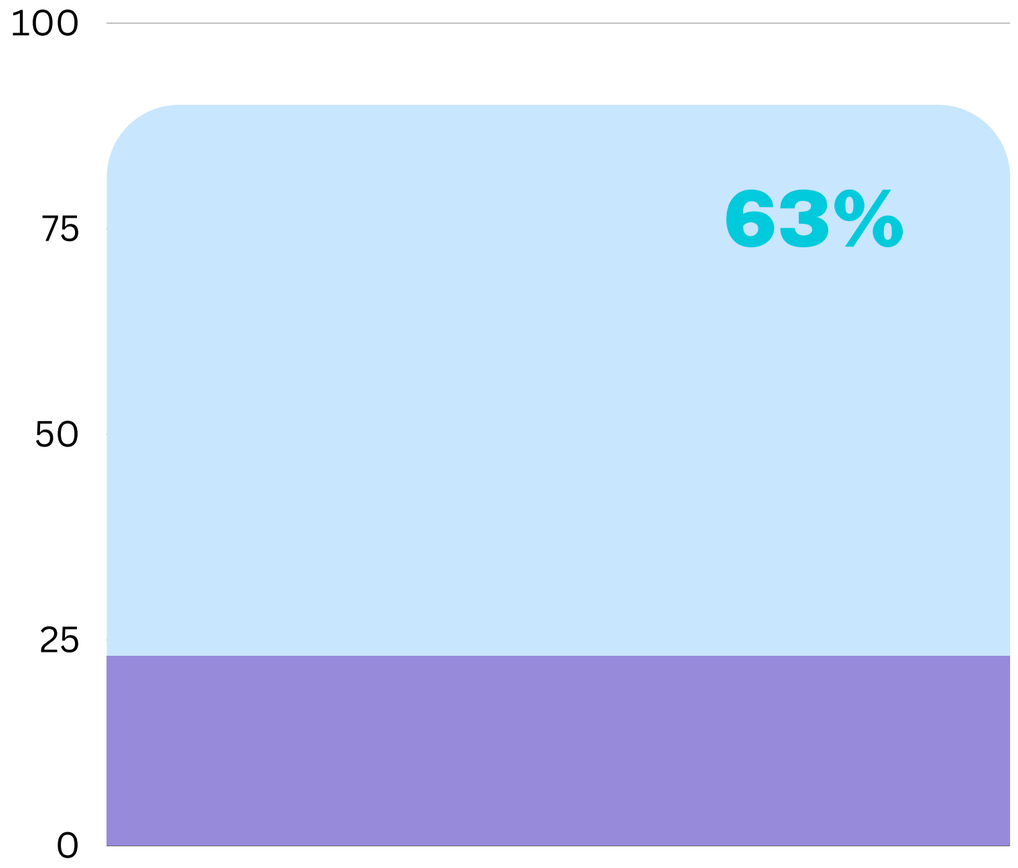


Indicating a desire to up-skill and contribute to the industry's growth

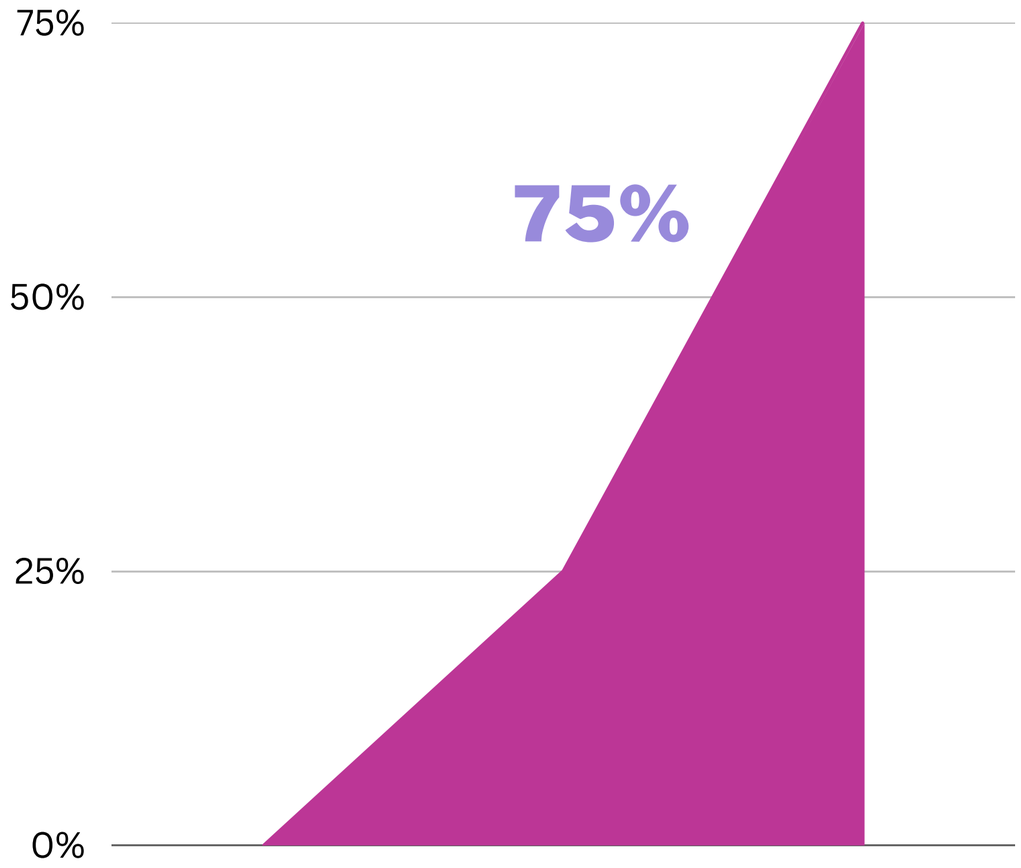
An overwhelming 54% of respondents expressed a need for specialisation in Online Gaming in Bachelor's courses related to Computer Science and Engineering



While acknowledging the significance of Data Science and AI in the online gaming business, 63% of respondents believe that current courses/education need to be more tailored to the sector's needs



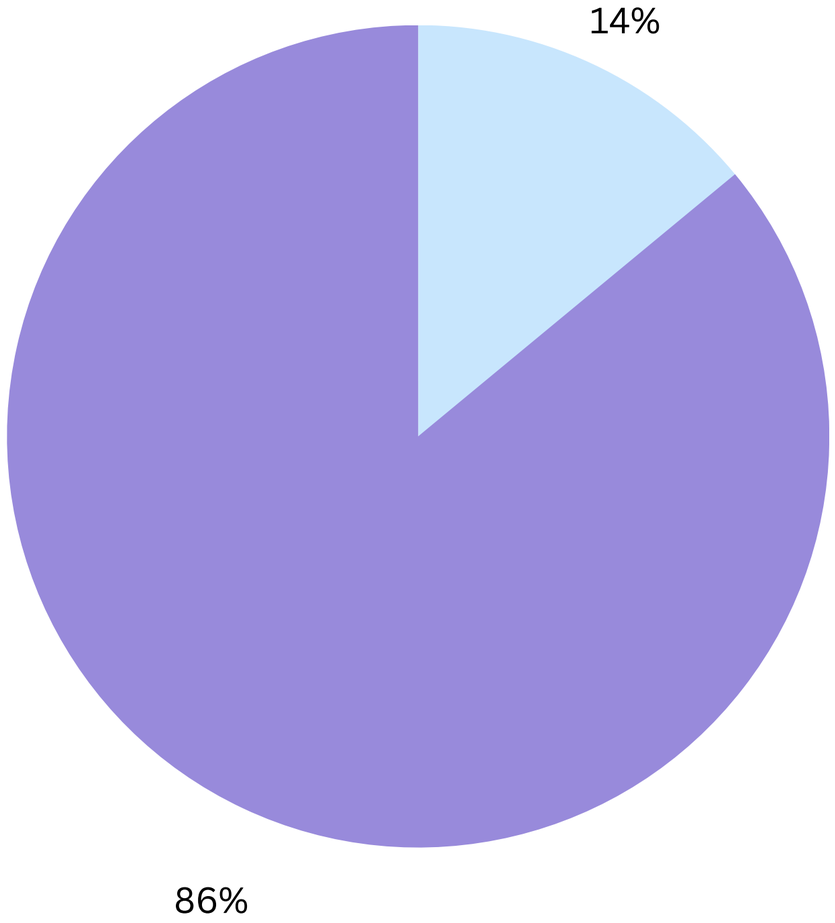
The majority of respondents (75%) expressed a preference for careers in technology areas related to 5G, metaverse, VR, and other new technologies



Indicating the sector's potential to attract talent through innovation

Respondents recognized the potential of 'Gamification' in expanding the scope of the gaming industry, with 56% agreeing that it offers tremendous opportunities for innovation

While acknowledging the government's efforts, around 14% of respondents expressed the need for further policies and initiatives in Animation, Visual Effects, Gaming, and Comics (AVGC) to ensure the online gaming sector's sustainable development



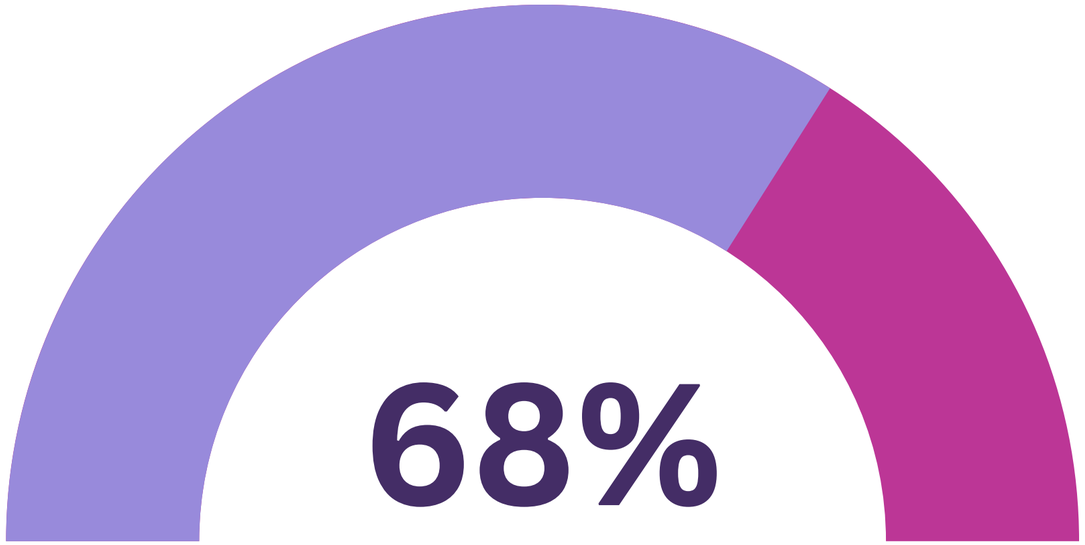
Over 73% of respondents expressed a high possibility* of considering a career in the online skill gaming industry

(rated 4 or 5 out of 5)

Indicating a significant interest and potential for growth for the sector

Approximately 68% of respondents believe* that opportunities in the online skill gaming sector can contribute to improving their overall skill sets

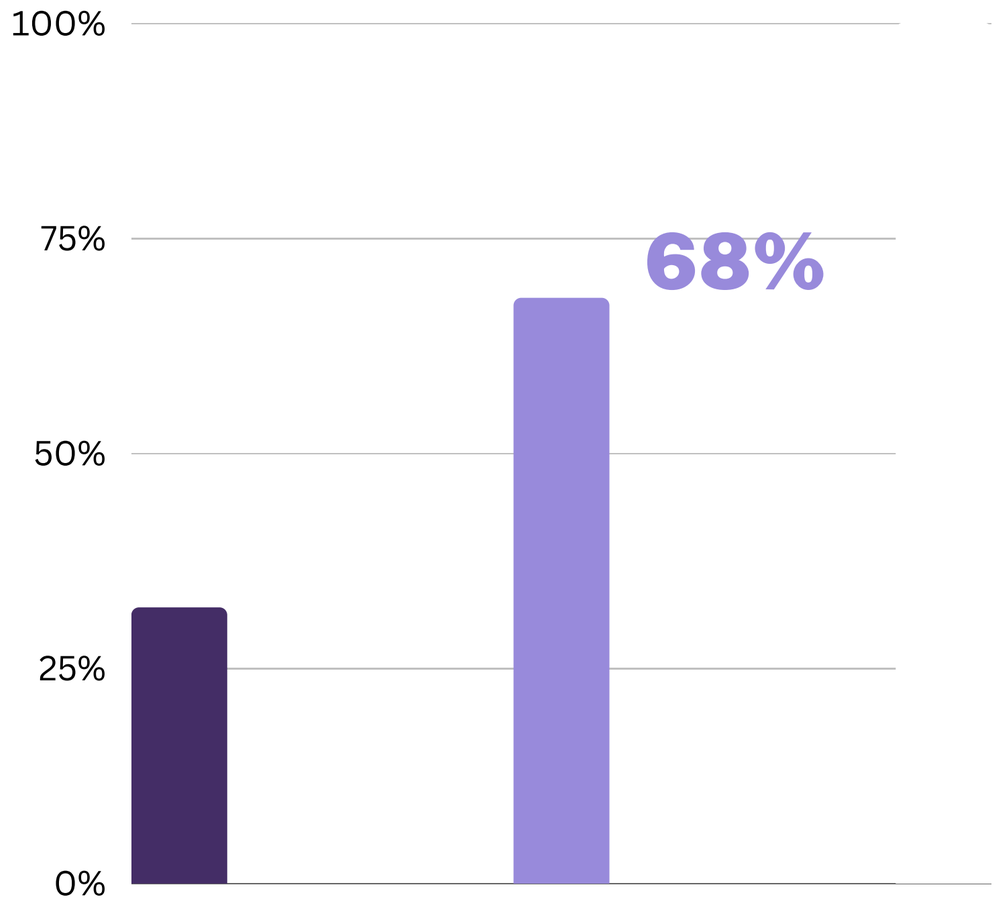
(rated 8 or higher out of 10)



Highlighting the sector's impact on skill development

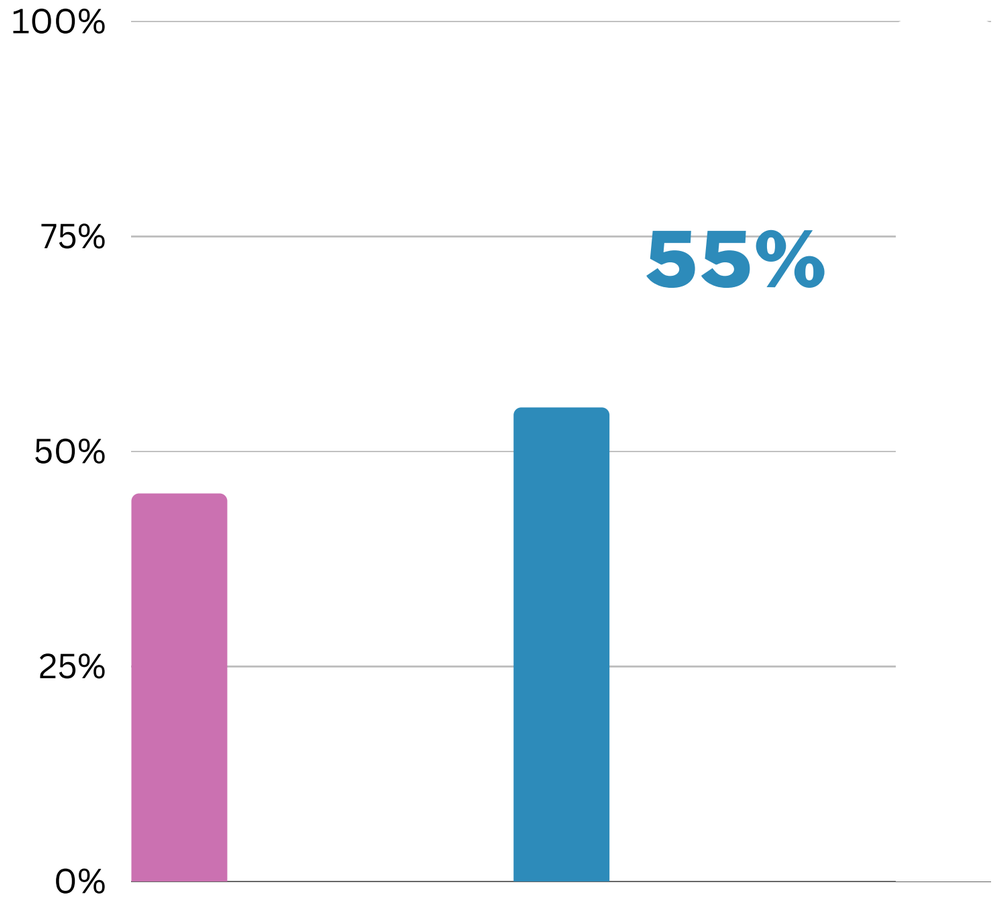
An overwhelming 68% of respondents expressed optimism* about the online skill gaming sector leading the next software revolution in India

(rated 4 or 5 out of 5)

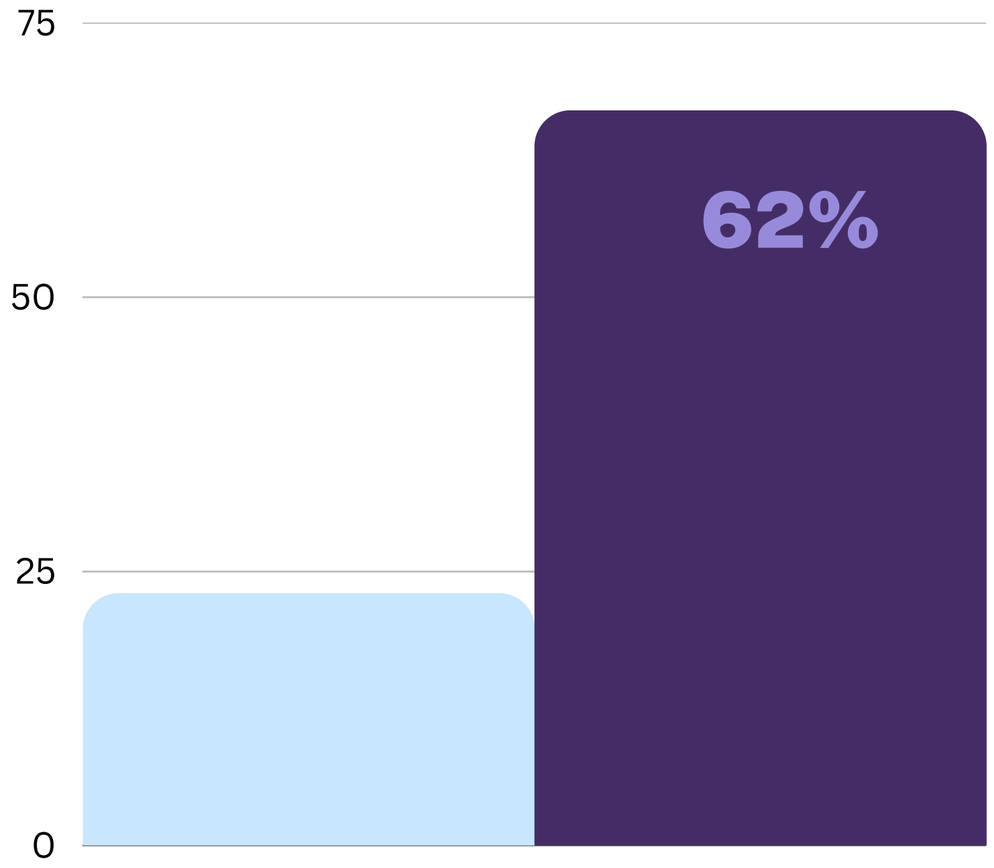


Emphasising its potential for technological innovation

Approximately 55% of respondents agreed that the online skill gaming sector, with its focus on adapting and developing new technologies, is a preferred sector for highly skilled engineers

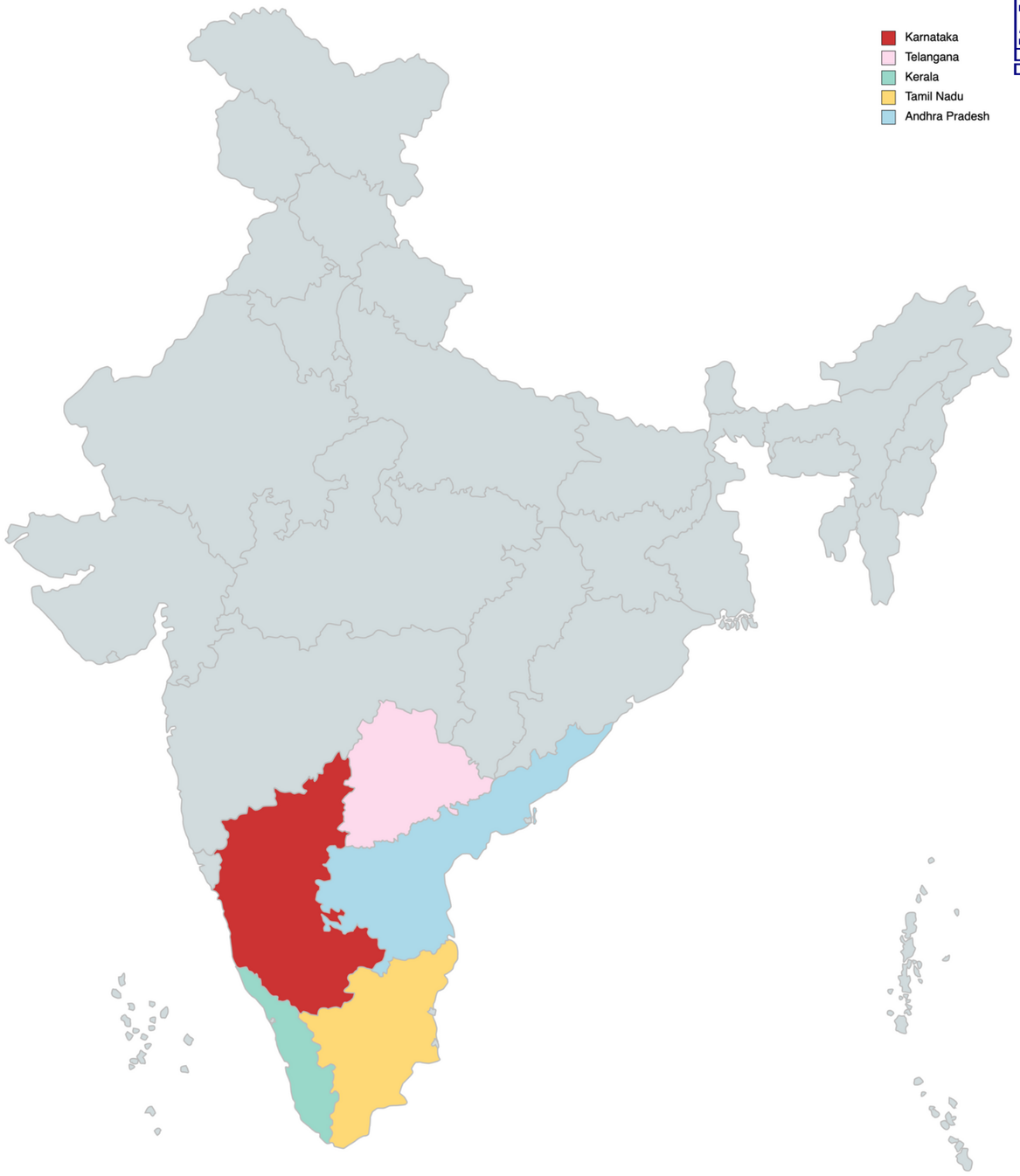


Over 62% of respondents perceived that the opportunities in the online skill gaming sector can enhance the overall skill sets of students and employees alike



State-wise disaggregated analysis of data

- Andhra Pradesh
- Telangana
- Karnataka
- Tamil Nadu
- Kerala



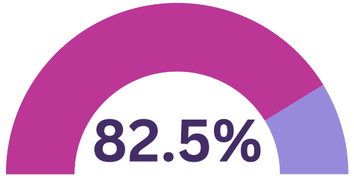
Key state-wise Insights

- Karnataka
- Kerala
- Andhra Pradesh
- Telangana
- Tamil Nadu

Key Insights: Karnataka

85% respondents from Karnataka agreed they are likely to opt for professional education in the gaming sector

Overall, 67% of total survey respondents shared this sentiment

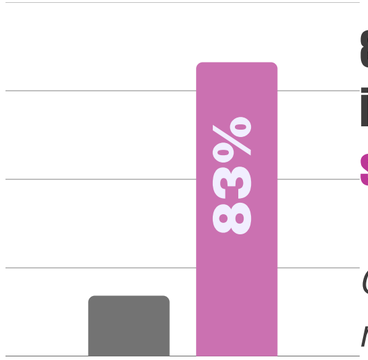


82.5% said India has the potential to lead the charter for the global gaming industry

Overall, 84.4% of total survey respondents shared this sentiment

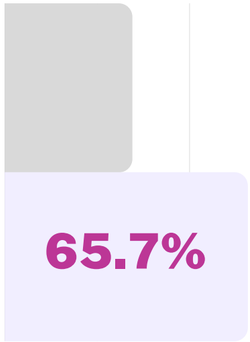
89.3% respondents said they are likely to look for a career in online skill gaming industry

Overall, 72.5% of total survey respondents shared this sentiment



83% said with the online skill gaming industry growing rapidly, it will lead the software revolution in the country

Overall, 68.5% of total survey respondents shared this sentiment



65.7% felt if given a chance to create for the world in India, it will reduce the flight of talent from the domestic market to overseas

Overall, 60.3% of total survey respondents shared this sentiment

Key Insights: Kerala

99.8% felt India has the potential to lead the charter for the global gaming industry

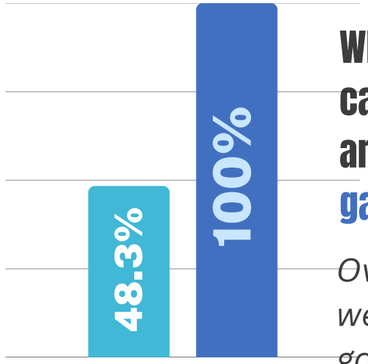
Overall, 84.4% of total survey respondents shared this sentiment

100% agreed that the opportunities available in the online skill gaming sector will help improve the overall skill set for students and professionals alike

Overall, 85.7% of total survey respondents shared this sentiment

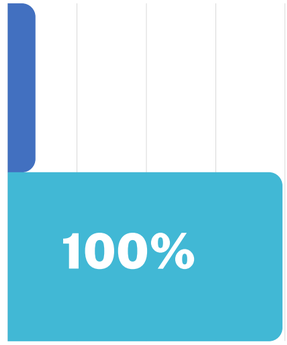
100% respondents agreed that the online skill gaming sector, with its focus on adapting and developing new technologies, is a preferred sector for highly skilled engineers

Overall, 93% of total survey respondents agreed with this sentiment



While only 48.3% were keen on pursuing a career in the gaming industry; 100% agreed they are likely to look for a career in online skill gaming industry

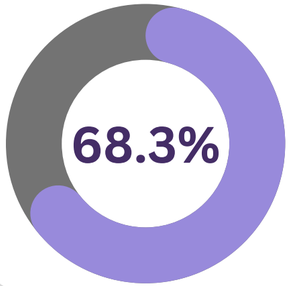
Overall, 72.5% of total survey respondents were likely to explore a career in online gaming



100% agreed that the online skill gaming industry will lead the software revolution in the country

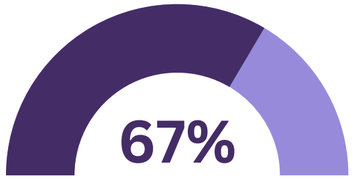
Overall, 68.5% of total survey respondents shared this sentiment

Key Insights: Andhra Pradesh



68.3% felt India has the potential to lead the charter for the global gaming industry

Overall, 84.4% of total survey respondents shared this sentiment

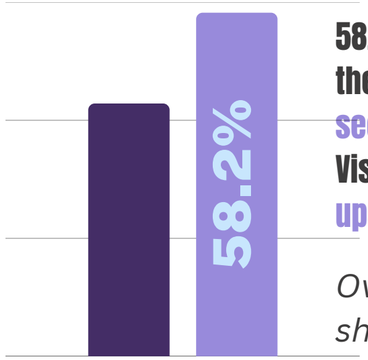


67% agreed that the opportunities available in the online skill gaming sector will help improve the overall skill set for students and professionals alike

Overall, 85.7% of total survey respondents shared this sentiment

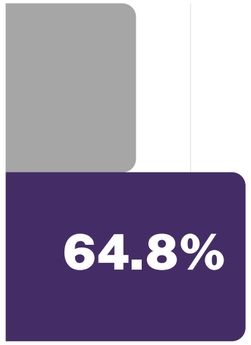
62.4% said they are likely to opt for a professional education in the Gaming sector

Overall, 67% of total survey respondents resonated with this sentiment



58.2% felt that the Government of India is moving in the right direction to ensure that the online gaming sector can further develop with the right Animation, Visual Effects, Gaming and Comic (AVGC) policies, upskilling initiatives, regulation in the sector and more

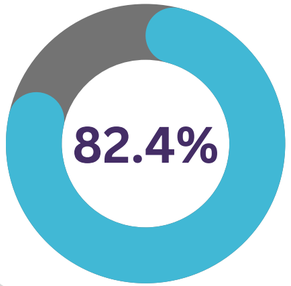
Overall, 69.9% of total survey respondents shared this sentiment



64.8% said current courses and education are not appropriate for data science and AI learning that forms the core of Online Gaming

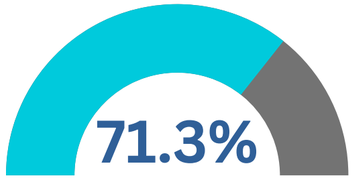
Overall, 25.9% of total survey respondents shared this sentiment

Key Insights: Telangana



82.4% felt India has the potential to lead the charter for the global gaming industry

Overall, 84.4% of total survey respondents shared this sentiment

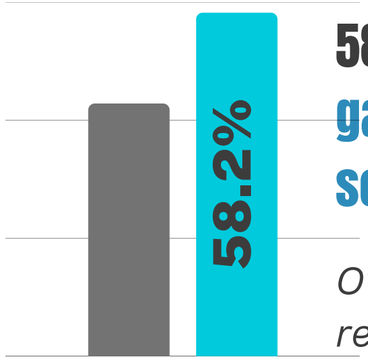


71.3% agreed that the opportunities available in the online skill gaming sector will help improve the overall skill set for students and professionals alike

Overall, 85.7% of total survey respondents shared this sentiment

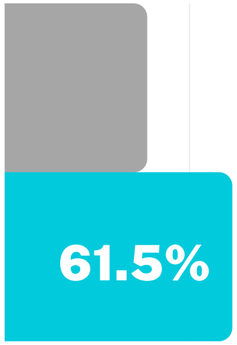
63.2% concurred a high possibility to opt for a career in the online skill gaming sector

Overall, 72.5% of total survey respondents shared this sentiment



58.2% agreed that the online skill gaming industry will lead the software revolution in the country

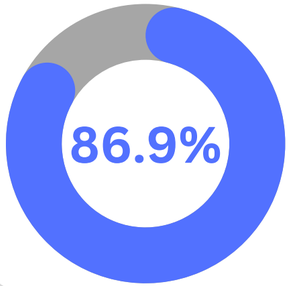
Overall, 68.5% of total survey respondents shared this sentiment



61.5% asked for a specialisation in Online Gaming in Bachelors courses related to computer science and engineering

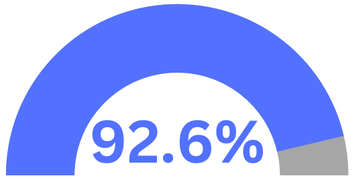
Overall, 46.2% of total survey respondents shared this sentiment

Key Insights: Tamil Nadu



86.9% felt India has the potential to lead the charter for the global gaming industry

Overall, 84.4% of total survey respondents shared this sentiment

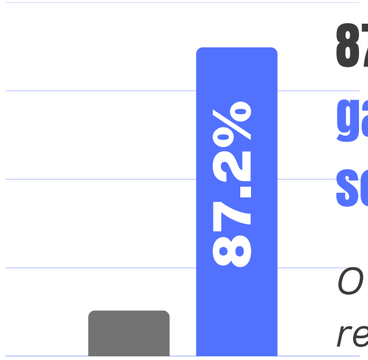


92.6% agreed that the opportunities available in the online skill gaming sector will help improve the overall skill set for students and professionals alike

Overall, 85.7% of total survey respondents shared this sentiment

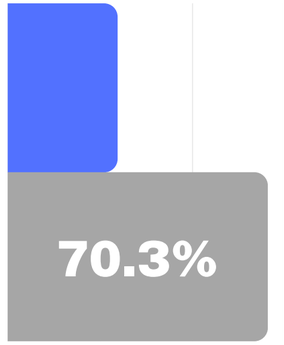
86.9% concurred a high possibility to opt for a career in the online skill gaming sector

Overall, 72.5% of total survey respondents shared this sentiment



87.2% agreed that the online skill gaming industry will lead the software revolution in the country

Overall, 68.5% of total survey respondents shared this sentiment

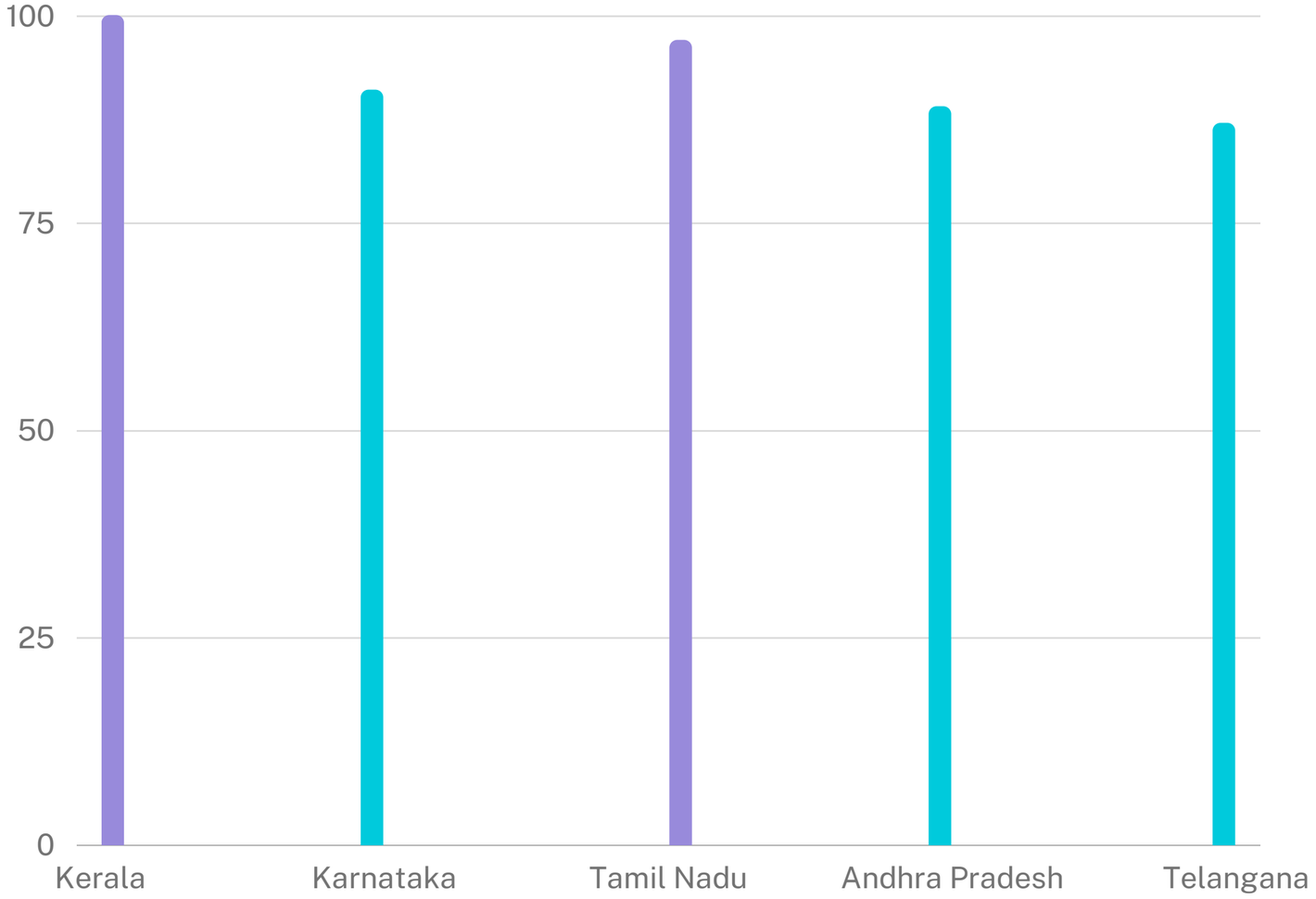


70.3% felt that the current courses on data science and AI which form the core of online gaming are appropriate

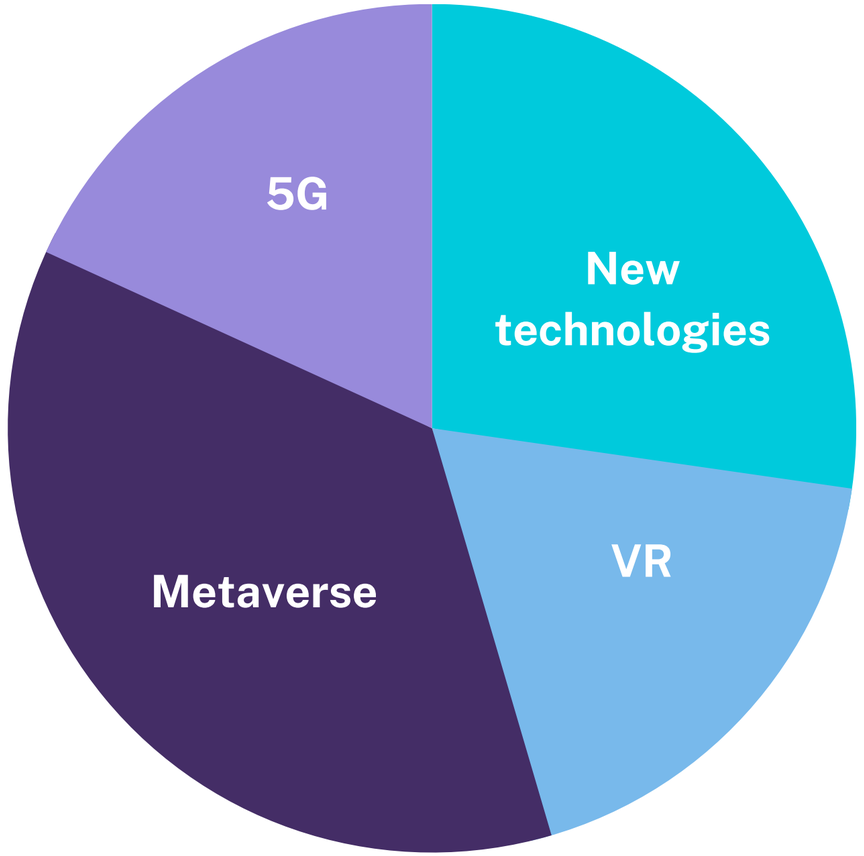
Overall, 62.6% of total survey respondents shared this sentiment

While all five states generally agree that the online skill gaming sector, with its focus on adapting and developing new technologies, is a preferred sector for highly skilled engineers, the enthusiasm is significantly higher for Kerala and Tamil Nadu

100% of the respondents in Kerala agreed to this opinion



Respondents from all the five states expressed a high preference for careers in technology areas related to 5G, metaverse, VR, and other new technologies, indicating the sector's potential to attract talent through innovation



Conclusion

Analysis and recommendation

This study takes a close look at the perception about the Online Skill Gaming Industry in India, a sunrise sector that has experienced unprecedented growth and holds the potential to drive the country's journey towards a $1 trillion digital economy. The significance of this sector lies not only in creating employment opportunities but also in fostering growth in allied domains such as software development, game testing, VFX, and more.

Our study explores India's talent landscape in this domain. The statistical analysis seeks to comprehend the aspirations and perspectives of engineering students and professionals across several key states, namely Andhra Pradesh, Telengana, Karnataka, Kerala, and Tamil Nadu. Through a carefully designed sample survey and analysis, we gauge their perceptions of the online real money gaming sector and its potential to enhance their skill sets. We present aggregate as well as disaggregated analyses across gender, occupation and states.

Our analyses span diverse facets, from the role of cutting-edge technologies like AI/ML to India's potential as a high skilled player in the global gaming industry. In fact, the edge persists even among the experienced people in the industry. Additionally, we explore the immense opportunities presented by 'Gamification' and the need for specialised education to fuel the gaming sector's growth.

It is expected that this report serves as a catalyst for informed decision-making. In light of our findings, **we recommend that our policymakers and industry leaders collaborate to create a conducive ecosystem that fosters innovation, invests in skill development, and promotes policies encouraging entrepreneurship and domestic investment**. Continued support through Animation, Visual Effects, Gaming, and Comics (AVGC) policies, up-skilling initiatives, and thoughtful regulation will be crucial in realising India's potential as a global gaming innovation hub.

Thank You