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Empowering IT Graduates: Employment Opportunities And Challenges In Goa

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Abstract:-Graduate employability has become a pressing concern in the field of Higher Education. In today's competitive job market, employers are looking for more than just subject knowledge from students. They expect graduates to possess a range of additional skills that will enable them to navigate the ever-changing landscape of the corporate world.

While subject knowledge is undoubtedly important, it is no longer sufficient on its own. To succeed in the current industry demands, graduates must also be equipped with a diverse set of skills that will enable them to face the battles and challenges that await them in the professional realm.

Employers are seeking individuals who possess strong communication skills, both written and verbal, as well as critical thinking and problem-solving abilities. These skills are vital in order to effectively collaborate with colleagues, analyse complex problems, and develop innovative solutions.

Furthermore, adaptability and resilience are key attributes that employers value in potential candidates. Graduates who can quickly adapt to new technologies, work environments, and industry trends will have a competitive edge in the job market. They must be able to embrace change, learn from failures, and bounce back from setbacks with determination and perseverance.

In addition, employers are increasingly placing importance on leadership and teamwork skills. Graduates who can demonstrate the ability to work well in teams, lead projects, and motivate others will be highly sought-after.

Lastly, a global mindset and cultural sensitivity are becoming essential skills in today's interconnected world. Graduates who can navigate diverse cultural and business contexts will be able to thrive in international settings and contribute to the success of their organisations.

In conclusion, while subject knowledge remains a crucial component of higher education, it is no longer enough to guarantee employability. Employers are seeking graduates who possess a range of additional skills that go beyond the classroom. By developing these skills, students will be better prepared to compete in the corporate world and face the challenges that lie ahead.

Keywords: Employability skills; Graduate performance; Graduate skills; Employers expectations; Employers perspectives; Higher education; Performance evaluation.

Introduction :-The state of Goa, situated on the western coast of India, is renowned for its picturesque landscapes, vibrant culture, and flourishing tourism industry. However, in recent years, it has also emerged as an emerging hub for Information Technology (IT) and software-related industries. As Goa continues to diversify its economic landscape, there is a growing interest in understanding the employment prospects for IT graduates in this region.

This study aims to delve into the multifaceted landscape of IT employment opportunities in Goa. It seeks to provide a comprehensive analysis of the present and future job market for individuals who have pursued degrees and qualifications in Information Technology within the state of Goa. By examining this facet of Goa's economy, we aim to shed light on the following key areas:

Employment Trends: explore historical data to identify trends in the IT job market, assessing whether it has been growing, stagnating, or undergoing other significant changes over recent years.

Current Job Market: Our research will analyse the existing state of the IT job market in Goa, including an examination of demand for IT professionals across various sectors and industries within the state.

Skills in Demand: identify the specific IT skills and qualifications that are in high demand within Goa's job market. Understanding these needs is crucial for graduates, educators, and policymakers alike.

Employer Expectations: This study aims to uncover the preferences and requirements of employers in Goa when hiring IT graduates. What qualifications, experience, and skills are they seeking?

Graduate Preparedness: An integral aspect of this research is the assessment of how well IT graduates from educational institutions in Goa are prepared for the job market. We will explore whether their education and training are aligned with industry requirements.

Salary and Compensation: The study will examine salary ranges and compensation packages for IT professionals in Goa. This analysis will be contextualised in comparison to national or global averages.

Industry and Sector Analysis: The investigation will identify which industries or sectors within Goa offer the most significant IT job opportunities and which sectors are expected to see growth in the future.

Government Initiatives: explore government policies, incentives, or initiatives aimed at promoting IT employment and the growth of the IT sector in Goa. Understanding the role of government support is crucial for assessing the region's potential.

Challenges and Barriers: identify any challenges or barriers faced by IT graduates in securing employment in Goa. This might include a lack of opportunities, competition, or specific skill gaps.

Recommendations: Based on our findings, provide actionable recommendations for students, educational institutions, and policymakers. These recommendations will aim to enhance IT employment opportunities in Goa, potentially including curriculum improvements, entrepreneurship promotion, and attracting IT companies to the region.

Future Outlook: The research will provide insights into the expected future growth and changes in the IT job market in Goa, considering factors like technology trends, economic conditions, and industry developments.

Geographic Variations: explore whether there are regional variations within Goa in terms of IT employment opportunities. Understanding these differences can help graduates make informed decisions about relocation for better prospects.

This study is driven by the objective of offering a comprehensive understanding of the employment prospects for IT graduates in Goa. Through rigorous research and analysis, we aim to provide valuable insights that can

assist students, educators, policymakers, and employers in making informed decisions, thereby contributing to the growth and development of the IT industry in this picturesque state.

Objective : The objective of this study is to comprehensively assess the employment prospects of Information Technology (IT) graduates in the state of Goa, India. The primary aim is to provide insights into the current and future job opportunities and career prospects for individuals who have obtained degrees or qualifications in IT within the state. The key objectives of this study include:

Examine Current Employment Trends: Analyse the current state of employment opportunities for IT graduates in Goa, including the number of job openings, demand for IT professionals, and the employment rate of recent graduates.

Identify Industry and Sector-Specific Opportunities: Investigate which industries and sectors within Goa offer the most significant employment opportunities for IT graduates. Determine whether specific sectors are experiencing higher demand for IT talent.

Evaluate Skill Requirements: Explore the specific IT skills and qualifications that are in high demand within Goa's job market, including technical skills, programming languages, certifications, and soft skills.

Assess Employer Expectations: Understand the expectations of employers in Goa when hiring IT graduates. Evaluate the qualifications, experience, and competencies they seek in prospective employees.

Determine Graduate Preparedness: Examine how well IT graduates from Goan educational institutions are prepared for the job market. Assess the alignment of their education and training with industry needs.

Analyze Salary and Compensation: Investigate salary ranges and compensation packages for IT professionals in Goa. Compare these figures to national and global averages to gauge competitiveness.

Explore Government Initiatives: Investigate government policies, incentives, or initiatives aimed at promoting IT employment and the growth of the IT sector in Goa. Understand the role of government support in shaping the job market.

Identify Challenges and Barriers: Discover any challenges or barriers that IT graduates in Goa face in securing employment. This may include a lack of opportunities, competition, or specific skill gaps.

Provide Recommendations: Based on the study's findings, offer practical recommendations for students, educational institutions, and policymakers. These recommendations may include curriculum improvements, skill development programs, and strategies for enhancing employment prospects.

Forecast Future Outlook: Provide insights into the expected future growth and changes in the IT job market in Goa. Consider factors such as technological advancements, economic conditions, and emerging industry trends.

Examine Geographic Variations: Investigate whether there are regional variations within Goa in terms of IT employment opportunities. Determine whether graduates need to relocate to specific areas for better job prospects.

By accomplishing these objectives, this study aims to provide a holistic understanding of the employment prospects for IT graduates in Goa. The findings and recommendations can assist students, educational institutions, policymakers, and employers in making informed decisions to improve IT employment opportunities and contribute to the growth of the IT sector in the region.

Hypothesis : For this Research article , planning to have three categories like Academics, Students and Industry , so accordingly the hypothesis is going to generate .

Industry Perspective :-

H0:-Null Hypothesis: According to an industry perspective, IT graduates in Goa have no different employment prospects.

H1:-Alternate Hypothesis: An industry perspective reveals that IT graduates in Goa have a different employment outlook.

Faculty Perspective :-

Ho:- Null Hypothesis :- "Employability of IT graduates in Goa is not correlated with academic performance or educational background."

H1: - Alternate Hypothesis:-"Education and academic performance of IT graduates in Goa are significantly correlated with employment prospects."

Students Perspective : -

Ho: Null Hypothesis: -"Goa's IT graduates perceive no significant impact of their education and skills on their employment prospects."

H1: Alternative Hypothesis:-" Goan IT graduates perceive their education and skills as having a significant positive impact on their employment prospects."

Problem Identification :-Examining a range of variables that impact an IT graduate's employability and professional development is necessary to pinpoint the issues surrounding employment prospects in Goa. The following are some of the main problems that could be causing difficulties in this field:

1. **Tiny IT Sector:** In comparison to bigger centres like Bangalore, Pune, or Hyderabad, Goa's IT sector is comparatively tiny. The quantity of IT graduates who can find work is decreased by this small market.
2. **Few IT Companies:** Because there are fewer IT companies in Goa, there are less opportunities for recent graduates, which causes fierce rivalry for the few positions that are available.
3. **Mismatch Between Education and business Requirements:** It's possible that some educational institutions' curricula may not fully correspond with what the IT business is currently asking for. Because of this mismatch, graduates may not possess the essential skills that companies look for.
4. **Lack of specific Training:** With specific skills like data science, artificial intelligence, cybersecurity, and cloud computing becoming more and more in demand, there might not be enough attention placed on them.
5. **Lack of Internship Programs:** Students may not have access to enough high-quality internship programs in Goa, which would prevent them from gaining real-world experience and exposure to the sector.
6. **Brain Drain:** A large number of gifted IT graduates leave Goa for other states or nations in quest of better employment prospects and greater pay. This phenomenon is known as the talent drain.
7. **Perception of Limited Growth:** Graduates may choose to relocate if they believe that Goa offers less prospects for job advancement than other areas.
8. **Lack of Networking Opportunities:** Goa may not have as many industry conferences, meetups, or events, which are essential for networking and advancing one's profession.
9. **Policy Gaps:** Insufficient regulations to draw and keep IT firms in Goa may restrict the expansion of the sector and the creation of jobs.
10. **Lack of Career Guidance:** Students may not receive enough career counselling and guidance to help them grasp the abilities required to succeed in the IT profession and navigate the employment market.

These are the main problems students face in Goa's IT scenario. Lack of concentration, inadequate reading habits, and lack of writing skills, and the increase in mobile usage are some of the major issues that today's youth are facing.

Literature Review : -

Fernandes, R. (2020) in their studies "Skill gaps in the IT sector: A case study of Goa" stated that examines the differences that exist between the abilities that Goan IT graduates possess and what the local IT sector requires. The study focuses on pinpointing specific deficiencies among graduates and offers solutions to close these gaps in order to increase employability. The study emphasises how important it is to match industry demands with educational outcomes in order to improve Goa's IT graduates' employability. Through curriculum changes, hands-on training, and strong industry connections, educational institutions can better prepare graduates for lucrative opportunities in the IT sector by solving skill gaps.

The Goa government's strategic vision and actions to grow the state's IT industry are outlined in the Goa IT Policy 2018. The policy's objectives are to improve employment prospects, support entrepreneurship and innovation, and establish a favourable climate for IT enterprises. The Goa IT Policy 2018 is a comprehensive framework that addresses infrastructure, skill development, and regulatory obstacles in order to stimulate the Goan IT sector. The strategy seeks to boost employment, stimulate economic growth, and establish a conducive environment for IT companies through strategic initiatives and incentives.

Kumar, S., & Rao, P. (2020) in their studies "Enhancing employability through industry-academia collaboration in Goa." stated that examines the impact of industry-academia cooperation on enhancing the employability of Goan IT graduates. In order to make sure that graduates have the knowledge and expertise needed to satisfy business demands, the essay underlines how critical it is to close the knowledge gap between academic institutions and the IT sector. The growth of the IT sector in Goa depends on improving employability through industry-academia partnership. Students can obtain applicable skills and experience through education that is in line with industry needs, increasing their competitiveness in the labour market. The report urges educational institutions and industry players to work together to build strong alliances and a strong ecosystem for job creation and skill development.

Naik, A., Dias, L., & Sawant, R. (2019) in their studies "Educational challenges and opportunities in the IT sector: A focus on Goa." stated that this study looks at the difficulties Goan IT students have in their academic pursuits and the options that can help them become more employable. The authors offer ways to close the gap between academia and the IT industry by analysing different facets of the educational system and industrial requirements. Highlight the importance of taking a multifaceted strategy to solving the problems with education in Goa's IT industry. The employability of IT graduates can be greatly increased by modernizing curricula, enhancing infrastructure, encouraging industry-academia collaborations, and emphasizing the development of both technical and soft skills. In order to establish a strong ecosystem for IT education and employment in Goa, the report urges government agencies, industry stakeholders, and educational institutions to work together.

NASSCOM. (2021). IT Industry in India: Trends and Future Outlook. New Delhi: NASSCOM.

The NASSCOM report offers a thorough examination of the present developments, obstacles, and opportunities facing the Indian IT sector. It draws attention to the industry's projected growth, technological developments, and key activities that will keep it competitive on a worldwide scale. The NASSCOM report emphasises the necessity for ongoing innovation and adaptability while highlighting the dynamic character of

the Indian IT sector. India can continue to be a leader in the global IT environment by concentrating on developing new technologies, strengthening industry-academia collaboration, and developing skills.

Patil, M., Kulkarni, R., & Desai, S. (2021) in their studies "Impact of COVID-19 on employment prospects of IT graduates" stated that this study looks into how India's IT graduates' employment prospects have been impacted by the COVID-19 outbreak. The writers examine a number of topics, including hiring patterns, skill needs, and graduates' and schools' adjustments to the new normal. The highlights how the COVID-19 pandemic has had a substantial influence on IT graduates' employment prospects. The industry's quick digital change has brought about fresh prospects despite early difficulties. Graduating students can more successfully negotiate the post-pandemic labour market by modifying their educational approaches and emphasising in-demand abilities.

Sharma, V. (2021) in their studies "Digital transformation and employment opportunities in IT: The Goan perspective." stated that examines how Goa's information technology (IT) industry is affected by the digital revolution in terms of job prospects. The study discusses how the labour economy is changing due to the swift progress made in digital technologies. Although there are certain obstacles associated with digital transformation, there is also great opportunity for job creation and economic expansion in Goa's IT industry. The secret to seizing these opportunities is for the public and commercial sectors to take proactive steps to ensure that workers have the knowledge and skills they need.

Sinha, P. (2019) in their studies "Internship opportunities and their impact on employability in Goa's IT sector." stated that Examines how internships might improve one's employability in the IT industry in Goa. The study looks at how internships affect graduates' skill sets and preparation for the career in information technology. In Goa's IT industry, internships are an essential part of employability strategies. Internships substantially improve graduates' employment prospects by offering priceless work experience and skill development. They also boost the general expansion and competitiveness of Goa's IT sector.

Need for the study : -The following is a quick synopsis of why a study on the job prospects of IT graduates in Goa is necessary:

1. Context: The evolving digital landscape and technical breakthroughs have an impact on Goa's distinct IT sector.
2. In order to match educational objectives with industry demands and to inform policy decisions, it is essential to comprehend the career prospects of IT graduates.
3. Understanding how emerging technologies like AI, cybersecurity, and data analytics affect employment responsibilities and skill requirements is essential.
4. Evaluation of present educational programs' suitability for preparing students for the changing needs of the IT industry is known as educational alignment.
5. Upskilling Needs: Determine graduate skill gaps to guide upskilling and reskilling programs.
6. Practical Exposure: Assessing how internships improve employability as shown by earlier research (e.g., Sinha, 2019).
7. Collaboration between sector and academia: Knowing how well educational institutions and the IT sector work together to provide real-world experience.
8. Job Placement Rates: Examining IT graduates' employment rates with regard to job types, pay scales, and advancement opportunities.
9. Employment Barriers: Determining obstacles like a lack of soft skills, insufficient technical skills, and a lack of career possibilities in particular fields.
10. Significance: Stressing the study's influence on how IT education and jobs are shaped in Goa.

Scope of the study : -

For recent graduates, the rapidly growing Information Technology (IT) sector in Goa has produced a dynamic environment full of potential and difficulties. Knowing the job possibilities of its IT graduates is becoming more and more crucial as the state aims to become a major force in the national and international IT scene. Through an examination of numerous factors influencing work preparedness, employability, and career outcomes for IT graduates in Goa, this study seeks to provide a thorough overview of these prospects.

This study's scope is carefully crafted to address important areas that influence the job market for recent IT graduates. It includes a geographical concentration on Goa, guaranteeing an in-depth exploration of the distinct regional features and industry dynamics. The study intends to collect a variety of viewpoints and ideas by focusing on employers in the IT sector, educational institutions, and recent IT graduates.

The employment rates, job roles, industries absorbing IT graduates, and the particular abilities and skills that are in demand are all important areas of research. The research will also examine how internships and work placements affect employability, offering a more sophisticated perspective of how real-world experience enhances preparation for the workforce.

In light of the difficulties and obstacles graduates encounter—such as skill shortages and shifting market conditions—the study will also look at socioeconomic variables that affect career prospects. The study aims to provide a comprehensive picture of the employment scenario by combining quantitative and qualitative research approaches, such as surveys, interviews, and secondary data analysis.

Actionable recommendations for policymakers, educational institutions, and industry stakeholders are among the projected consequences of this research, which also includes extensive insights into current employment trends and an assessment of skill alignment between school outputs and industry requirements. The study is to increase the employability of IT graduates in Goa and contribute to the general expansion of the region's IT sector by identifying areas for improvement and possibilities for growth.

This thorough approach guarantees that the study not only identifies current problems but also suggests tactical ways to close the skills gap in the workforce and eventually develop a more competitive and robust IT workforce in Goa.

Region: In order to get a complete view of job opportunities throughout the state, the study focuses on Goa, covering both urban and rural areas.

Employment Rates: Determining the proportion of IT graduates who find work between six and twelve months after graduating.

Job Roles and Sectors: Determining the kinds of sectors (like product development, IT services, and data analysis) and job roles (like software development, data analysis) in which graduates are employed.

Skills and Competencies: Assessing graduates' compliance with employers' expectations about the technical and soft skills that are most in demand.

Impact of Internship: Examining how work placements and internships improve a candidate's employability and preparation for a job.

Finding differences between the abilities obtained via education and those needed by the industry is known as "skill gap analysis."

Employment Market Dynamics: Knowing what influences the employment market, such as industry trends, technology developments, and prevailing economic situations.

Socioeconomic Factors: Examining how one's socioeconomic status influences professional advancement and employment prospects.

Target Population:

Recent graduates in IT from Goa's universities, colleges, and career training facilities, among other educational establishments.

Employers: Businesses involved in Goa's IT industry, from regional start-ups to global conglomerates.

Educational Institutions: Tech schools, universities, and institutions that provide IT-related courses and programs.

Anticipated Results

Employment Trends: Comprehensive information about Goa's present employment trends for IT grads.

Assessment of how closely educational achievements match industrial demands is known as skills alignment.

Policy Recommendations: Advice for decision-makers on how to enhance job opportunities by collaborating with industry, reshaping education, and offering skill development opportunities.

Institutional Strategies: Suggestions for curriculum creation, industrial partnerships, and internship programs for educational institutions.

Restrictions

Time Frame: Because the study will only cover a limited period of time, long-term employment patterns may not be taken into consideration.

Sample Size: The number of participants and the sample's representativeness may have an impact on the study's reach.

Geographical Restrictions: Although concentrating on Goa offers comprehensive regional insights, conclusions might not apply to other areas.

Research Methodology : -

This study uses a thorough and methodical methodology to look into the career prospects of IT graduates in Goa. The study employs a mixed-methods approach to gather and examine quantitative and qualitative data, offering a thorough grasp of the factors influencing employability and the state of work today.

Research Design: Mixed-Methods Approach: To obtain comprehensive and wide-ranging insights, combining quantitative surveys and qualitative interviews.

Surveys:

Target Population: Recently graduated IT students from Goa's institutions, universities, and vocational training facilities.

Sampling technique: stratified random sampling, which ensures that the sample is diverse and represents a range of educational institutions and backgrounds.

Survey Tool: A well-structured questionnaire intended to gather information about job status, experiences with job searches, necessary skills, internship experiences, and career goals.

Administration: To increase response rate and reach, distribution should be done both in-person and online.

Interview :

Participants include HR directors, employers in the IT field, IT program instructors, and a chosen cohort of recent graduates.

Interview structure: semi-structured to promote flexibility in responses and in-depth investigation.

Focus areas include skill gaps, job hurdles, the influence of educational programs, employer expectations, and the function of internships.

Data analysis is the process of evaluating employment trends and skill gaps using both quantitative and qualitative data.

Quantitative Information

Statistical analysis: Utilize inferential statistics, such as regression analysis and correlation, to examine associations between variables, and descriptive statistics, such as mean, median, and mode, to describe survey data.

Software: Data analysis and visualization using statistical software, such as R or Python.

Verification and Trustworthiness

Pilot Testing: Testing the questionnaire's relevance and clarity through a pilot study, then making necessary revisions in response to comments.

Triangulation: To improve the validity and reliability of the results, findings from surveys, interviews, and secondary data are cross-verified.

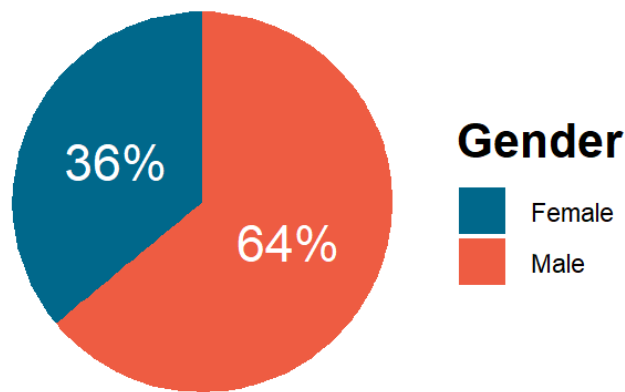
Data Interpretation and Result

Student Perspective :-

Gender wise distribution

Male	Female
80	45
64%	36%

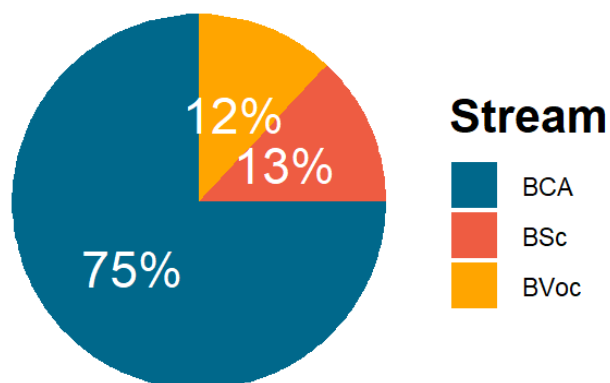
Gender-Distribution of students



Streamwise distribution of Data

Stream	Number	percentage
Bvoc	15	12%
BCA	94	75%
Bsc (computer Science)	16	13%

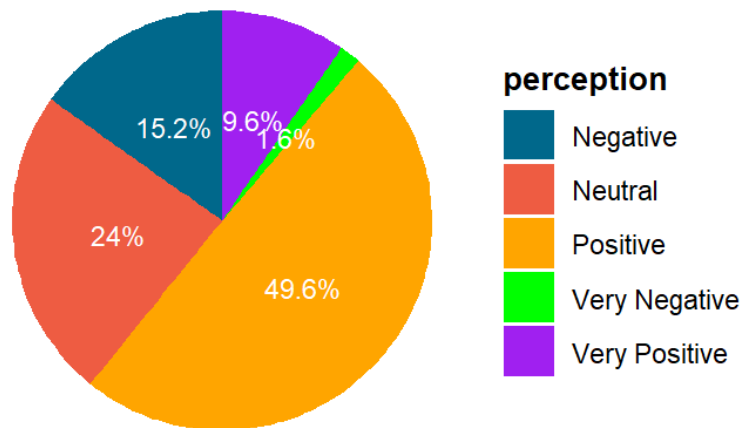
Stream-Distribution of students



What is your perception of the employment prospects for IT graduates in Goa?

Negative	15.2
Neutral	24
Positive	49.6
Very Negative	1.6
Very Positive	9.6

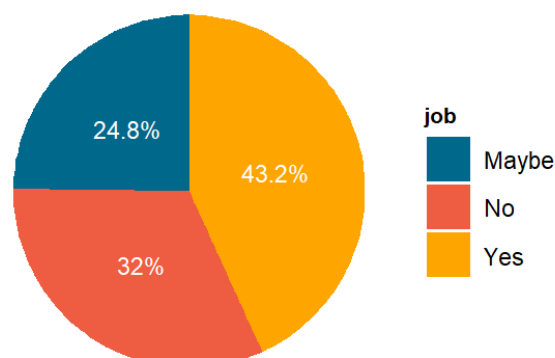
Employment perception in IT graduates in Goa



Are there sufficient job opportunities for IT graduates in Goa?

Yes	54	43.2%
No	40	32%
May be	31	24.8%

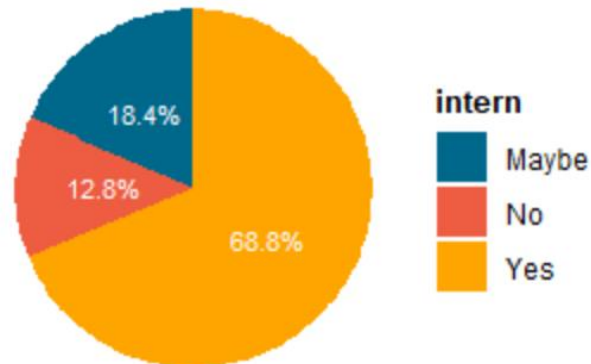
Are there sufficient job opportunities for IT graduates in Goa?



Have you had any difficulty finding employment or internships in the IT sector in Goa?

Yes	86	68.8%
No	16	12.8%
May be	23	18.4%

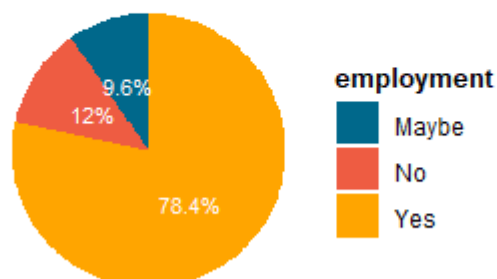
Have you had any difficulty finding employment or



Have you considered seeking employment opportunities outside of Goa?

Yes	98	78.4%
No	15	12%
May be	12	9.6%

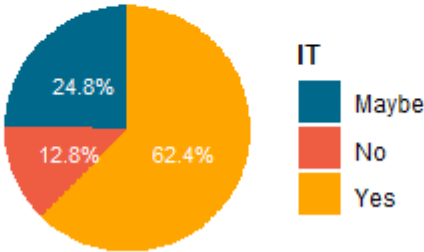
Have you considered seeking employment opportu



Would you recommend IT-related courses to other students considering future employment prospects in Goa?

Yes	78	62.4%
No	16	12.8%
May be	31	24.8%

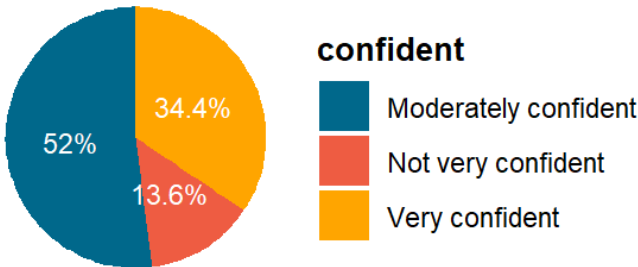
Would you recommend IT-related courses to oth



How confident are you in finding a job in the IT sector after graduation?

Moderately confident	65	52.0%
Not very confident	17	13.6%
Very Confident	43	34.4%

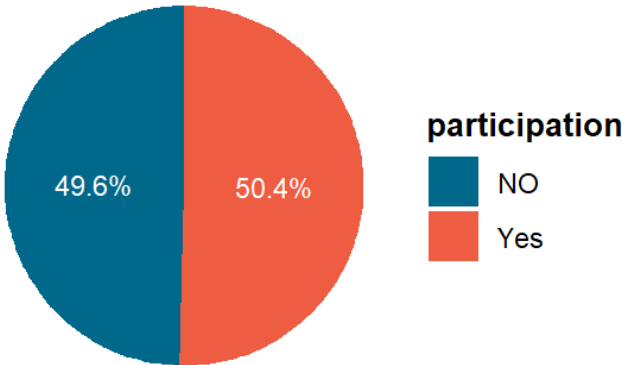
finding a job in the IT sector after graduation?



Have you participated in any career fairs or job recruitment events specific to the IT sector in Goa?

No	62	49.6%
Yes	63	50.4%

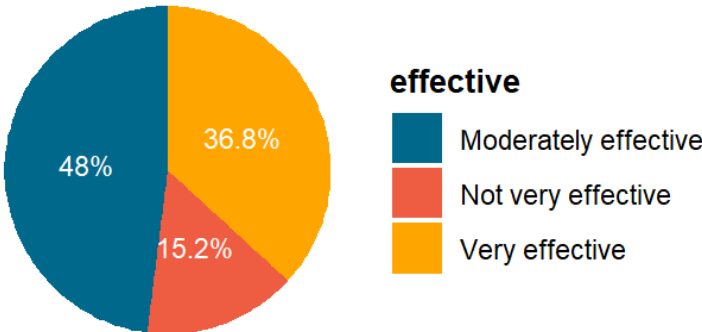
job recruitment specific to the IT sector in Goa?



Please rate the effectiveness of such career fairs or job recruitment events in helping you secure job opportunities in the IT sector.

Moderately effective	60	48.0%
Not very effective	19	15.2%
Very effective	46	36.8%

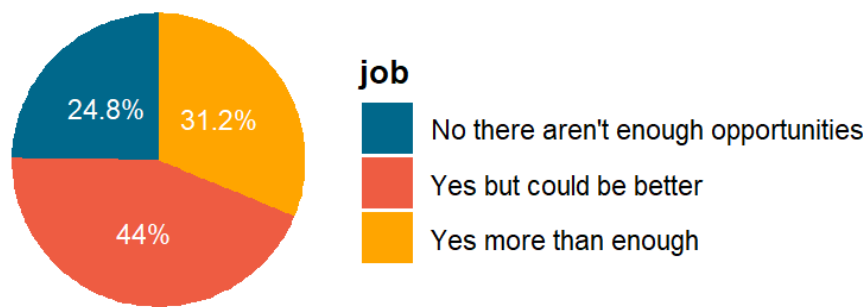
job recruitment secure job opportunities in IT sector.



Do you think the IT sector in Goa provides enough job opportunities for IT graduates?

No, there aren't enough opportunities	31	24.8%
Yes, but could be better	55	44.0%
Yes, more than enough	39	31.2%

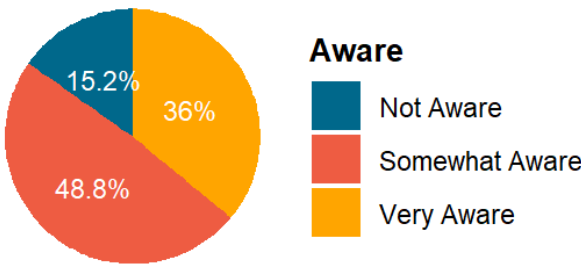
Goa provides enough job opportunities for IT graduates



Are you aware of the current job market for IT graduates in Goa?

Not Aware	19	15.2%
Somewhat Aware	61	48.8%
Very Aware	45	36.0%

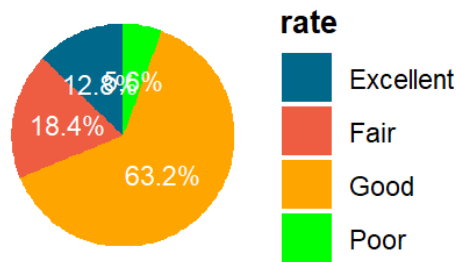
current job market for IT graduates in Goa?



How would you rate the quality of IT education you have received in Goa?

Excellent	16	12.8%
Fair	23	18.4%
Good	79	63.2%
Poor	7	5.6%

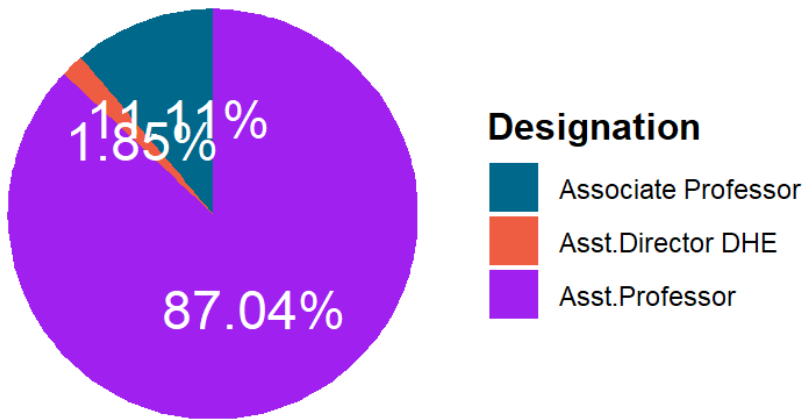
quality of IT education in Goa



Academic Perspective :-

Associate Professor	6	11.11%
Asst. Professor	47	87.04%
Asst. Director DHE	1	1.85%

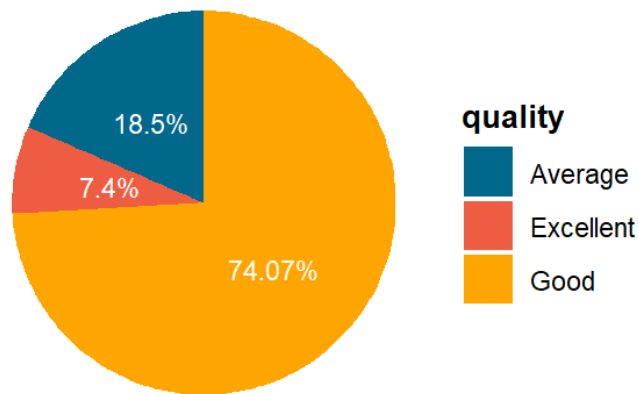
Designation



How would you rate the quality of IT education and training in Goa?

Average	10	18.5
Excellent	4	7.4
Good	40	74.04

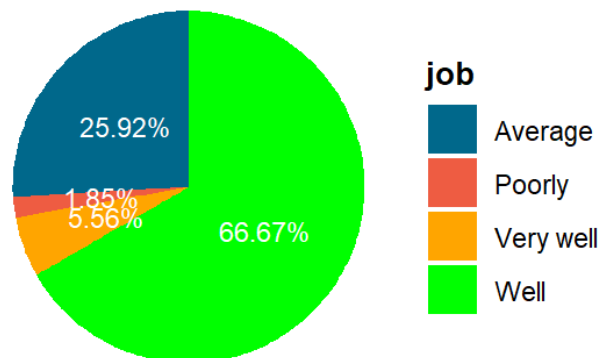
Quality of IT education and training in Goa?



How well do you think the IT curriculum in Goa prepares students for the job market?

Average	14	25.92%
Poorly	1	1.85%
Very well	3	5.56%
Well	36	66.67%

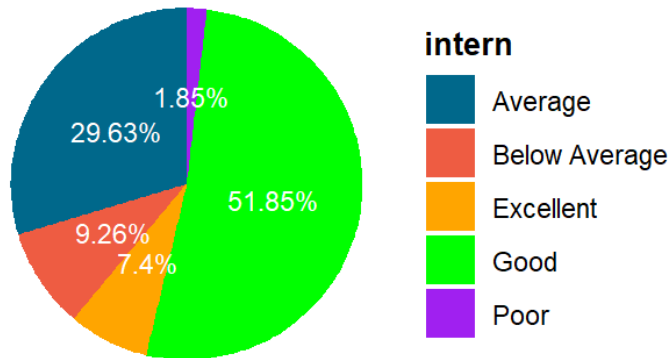
IT curriculum in Goa prepares students for the job



How would you rate the availability of internship opportunities in Goa for IT students?

Average	16	29.62%
Below Average	5	9.26%
Excellent	4	7.40%
Good	28	51.85%
Poor	1	1.85%

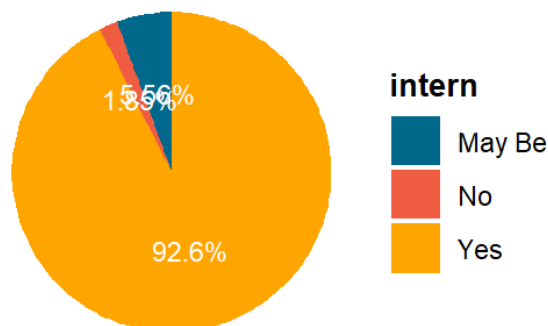
internship opportunities in Goa for IT students



Do you feel that Industry Connect is much needed to create good job prospects in Goa ?

May be	3	5.56%
No	1	1.85%
Yes	50	92.60%

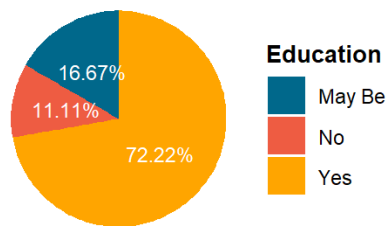
Industry Connect is much needed to creat job in G



Do you believe that IT education in Goa adequately prepares students for the employment market?

May be	9	16.67%
No	6	11.11%
Yes	39	72.22%

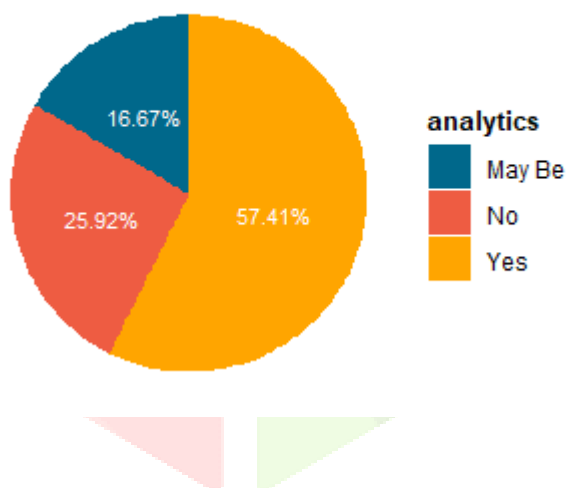
IT education in Goa prepares for the employment.



As Academician , Do you feel that IT graduates in Goa has good analytical skills which is needed by Industry ?

May be	9	16.67%
No	14	25.92%
Yes	31	57.41%

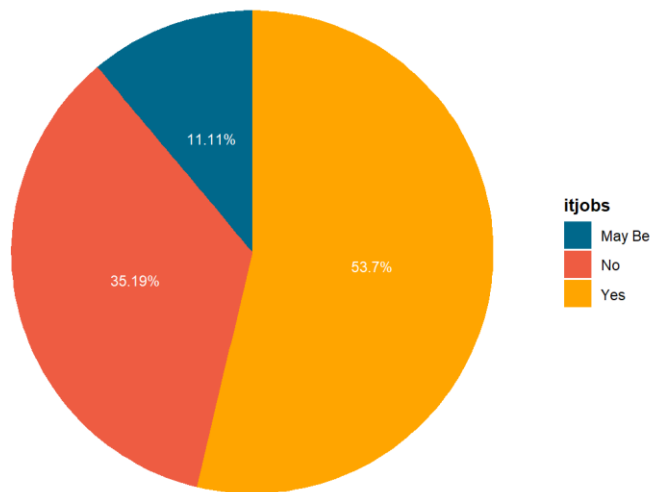
As Academician , Do you feel that IT graduates in



Do you feel the IT grads are IT Job Market ready ?

May be	6	11.11%
No	19	35.19%
Yes	29	53.70%

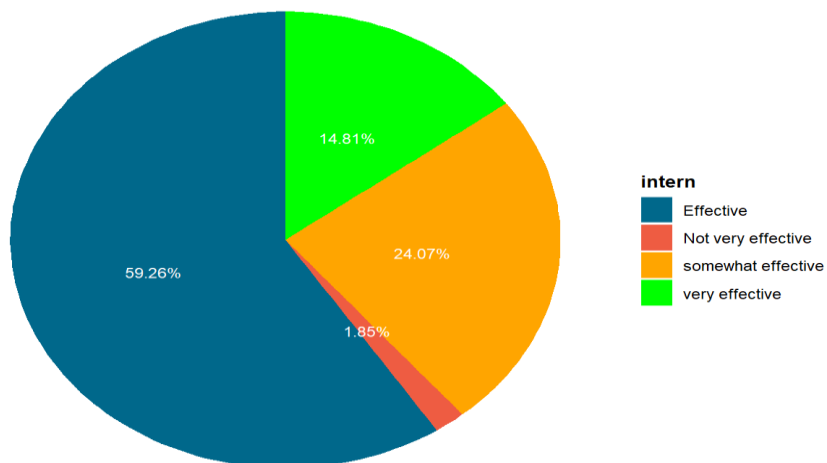
Do you feel the IT grads are IT JOB market ready



How effective do you think internships are in enhancing the job prospects of IT students?

Effective	32	59.26%
Not very Effective	1	1.85%
Some what effective	13	24.07%
Very Effective	8	14.81%

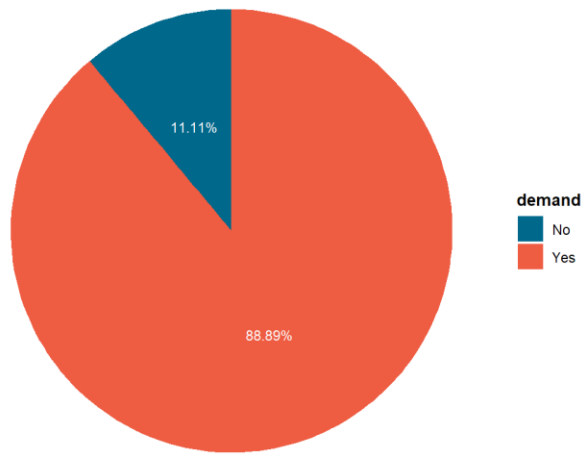
Do you feel the IT grads are IT JOB market ready



Do you think there is a demand for IT professionals in Goa?

No	6	11.11%
Yes	48	88.19%

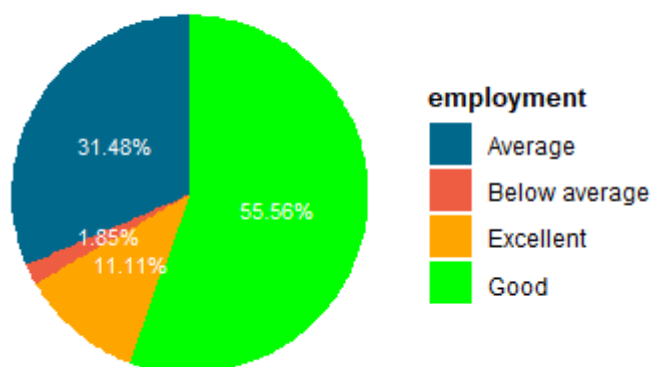
Do you think there is a demand for IT professionals in Goa?



How would you rate the overall employment prospects for IT graduates in Goa?

Average	17	31.48%
Below average	1	1.85%
Excellent	6	11.11%
Good	30	55.56%

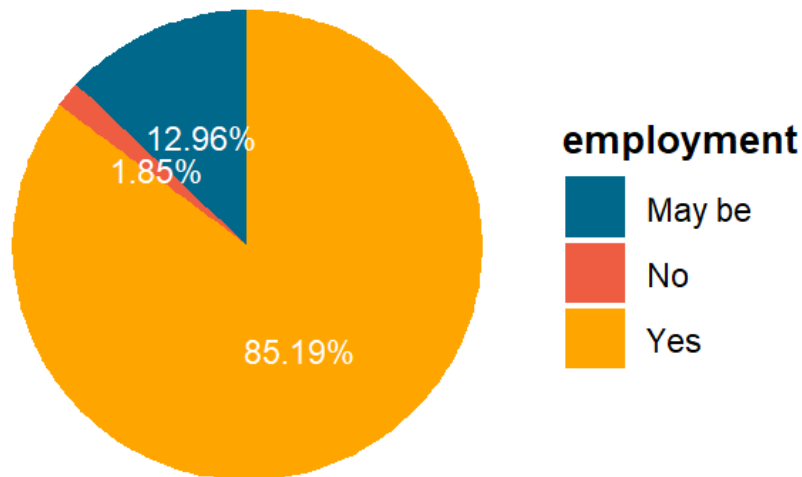
How would you rate the overall employment prosp



As academicians, do you feel IT companies should consider local Goan students for job in Industry ?

May be	7	12.96%
No	1	1.85%
Yes	46	85.19%

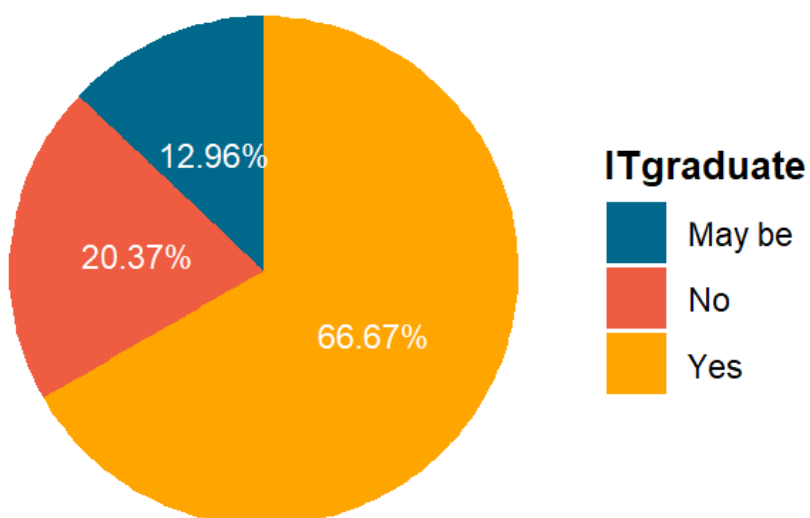
IT companies consider local Goan for job.



In Goa, do you feel we have proper IT infrastructure to accommodate IT graduates?

May be	7	12.96%
No	11	20.37%
Yes	36	66.67%

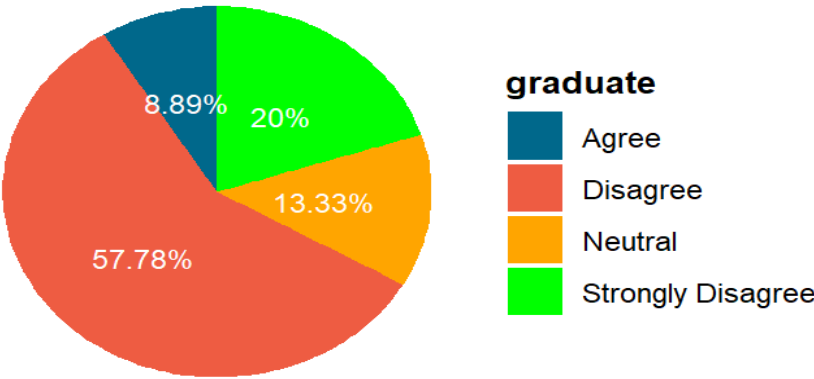
IT infrastructure to accommodate IT graduates?



Industry Perspective

Do you feel graduate students coming for interview are industry ready?

graduate students coming are industry ready?

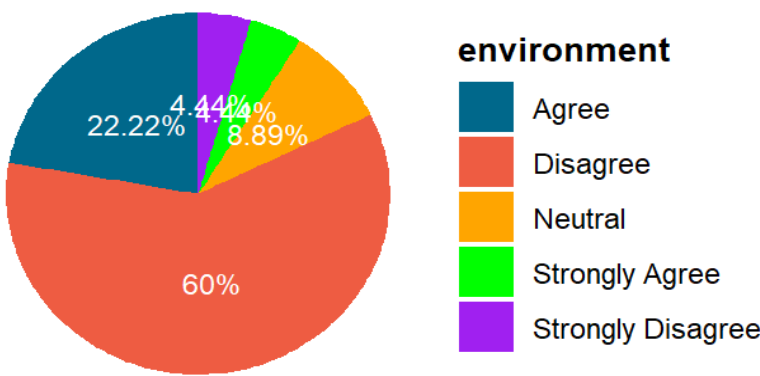


Agree	4	8.89%
Disagree	26	57.78%
Neutral	6	13.33%
Strongly Agree	0	0.00%
Strongly Disagree	9	20.00%

Would you say graduates are capable of adapting to any work environment and are willing to take on challenges?

Agree	10	22.22%
Disagree	27	60.00%
Neutral	4	8.89%
Strongly Agree	2	4.44%
Strongly Disagree	2	4.44%

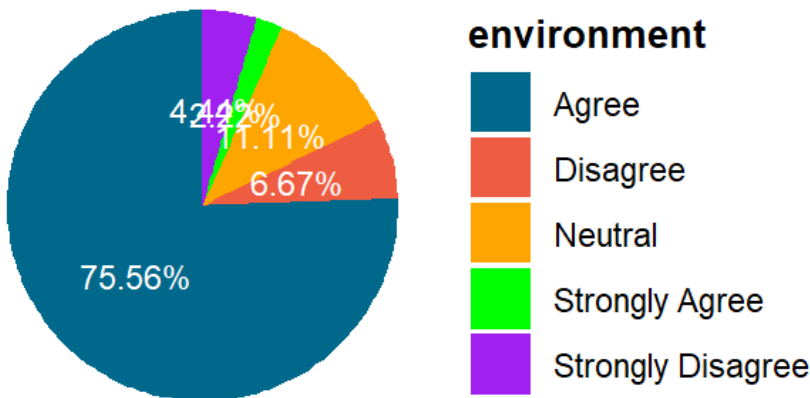
graduates are capable of adapting to any work e



According to your perspective as an employer, do Goan graduates communicate well?

Agree	34	75.56%
Disagree	3	6.67%
Neutral	5	11.11%
Strongly Agree	1	2.22%
Strongly Disagree	2	4.44%

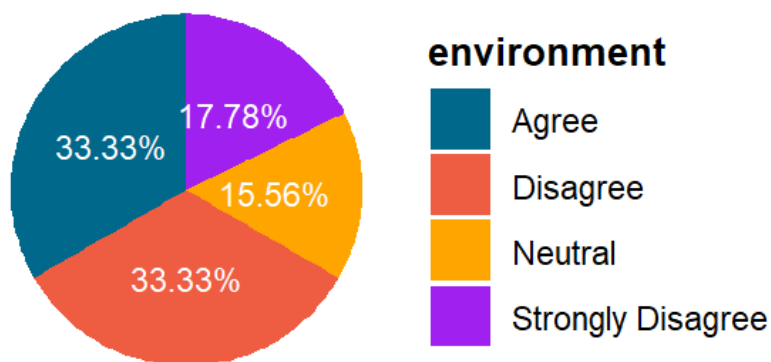
Goan graduates communicate well.



Is the graduate student industry ready according to you as an employer? Do they possess the domain knowledge that companies require?

Agree	15	33.33%
Disagree	15	33.33%
Neutral	7	15.55%
Strongly Disagree	8	17.78%

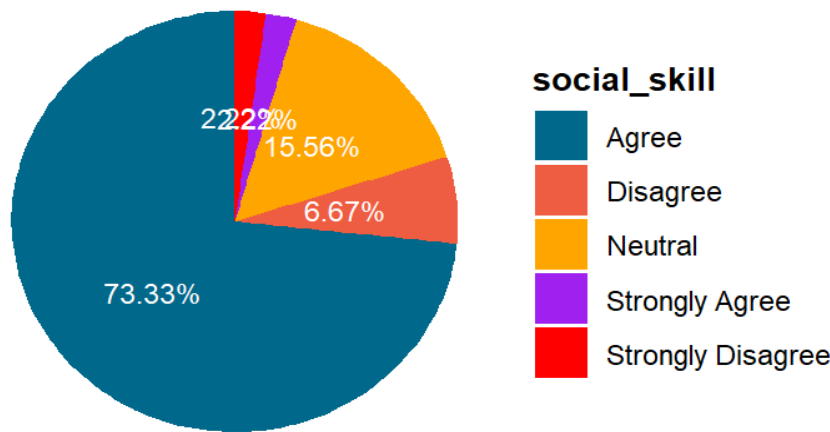
Is the graduate student industry ready accordi



Do you believe that the employee you are in the process of hiring has good social skills?

Agree	33	73.33%
Disagree	3	6.67%
Neutral	7	15.56%
Strongly Agree	1	2.22%
Strongly Disagree	1	2.22%

Do you believe that the employee you are in the prc



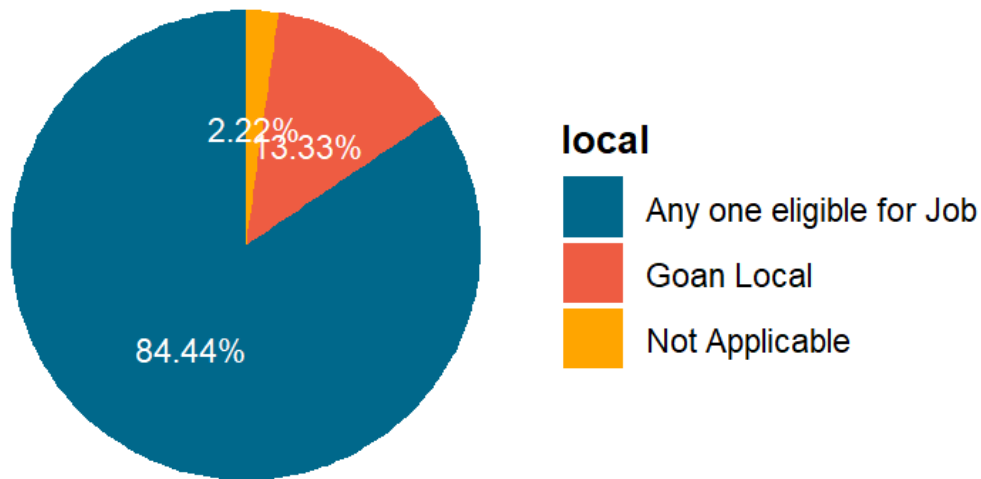
Do you believe graduates who join your team will be the best team members who work for you.

Agree	30	66.67%
Disagree	7	15.56%
Neutral	5	11.11%
Strongly Agree	2	4.44%
Strongly Disagree	1	2.22%

Companies in Goa prefer to hire local IT graduates over those from other states.

GOA origin Eligible Candidates	6	13.33%
Any one eligible for Job	38	84.44%
Not applicable	1	2.22%

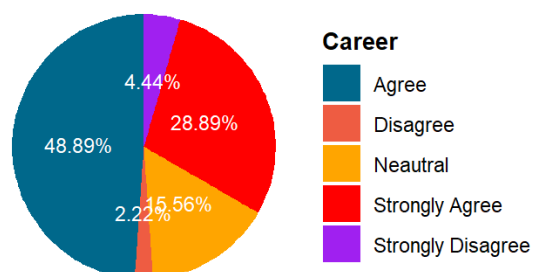
local IT graduates over those from other states.



The IT industry in Goa offers good career growth opportunities for IT graduates.

Agree	22	48.89%
Disagree	1	2.22%
Neutral	7	15.56%
Strongly Agree	13	28.89%
Strongly Disagree	2	4.44%

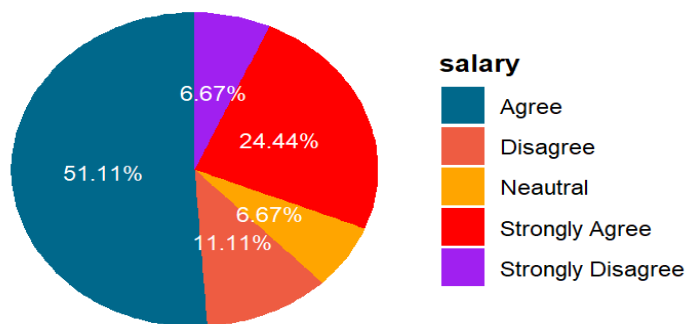
Goa offers good career growth opportunities for IT graduates.



The IT industry in Goa provides competitive salaries to IT graduates.

Agree	23	51.11%
Disagree	5	11.11%
Neutral	3	6.67%
Strongly Agree	11	24.44%
Strongly Disagree	3	6.67%

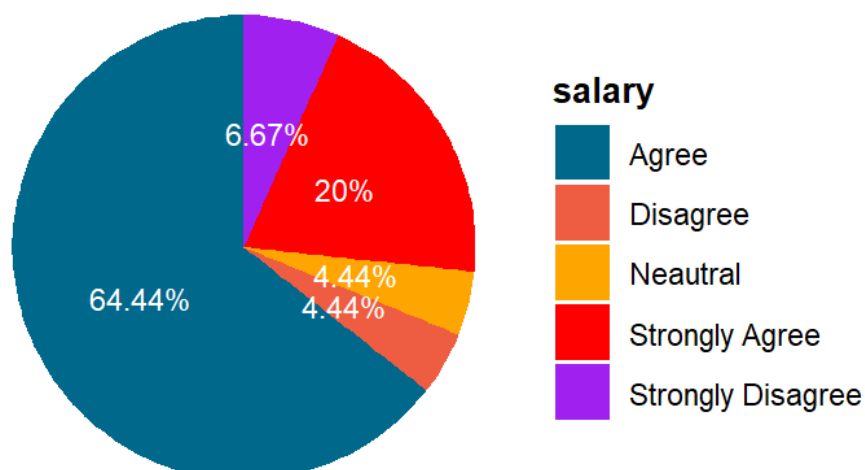
Goa provides competitive salaries to IT graduates.



The IT industry in Goa actively participates in the development and training of IT graduates.

Agree	29	64.44%
Disagree	2	4.44%
Neutral	2	4.44%
Strongly Agree	9	20%
Strongly Disagree	3	6.67%

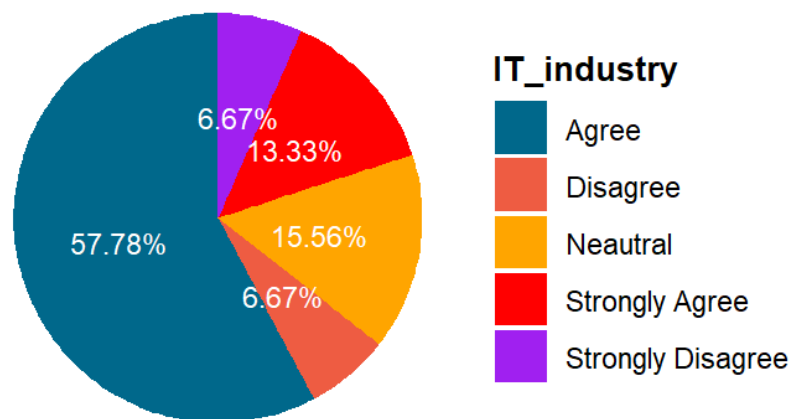
The development and training of IT graduates.



The government of Goa supports the growth of the IT industry and employment of IT graduates.

Agree	26	57.78%
Disagree	3	6.67%
Neutral	7	15.56%
Strongly Agree	6	13.33%
Strongly Disagree	3	6.67%

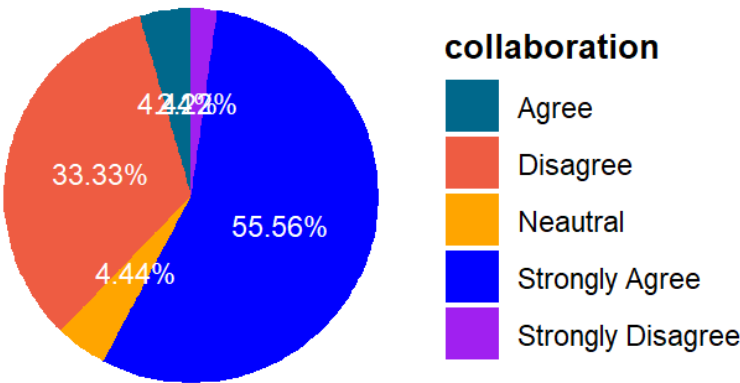
The growth of the IT industry and employment of IT gr



There is a need for more collaboration between educational institutions in Goa and the IT industry to ensure the employability of IT graduates.

Agree	2	4.44%
Disagree	15	33.33%
Neutral	2	4.44%
Strongly Agree	25	55.56%
Strongly Disagree	1	2.22%

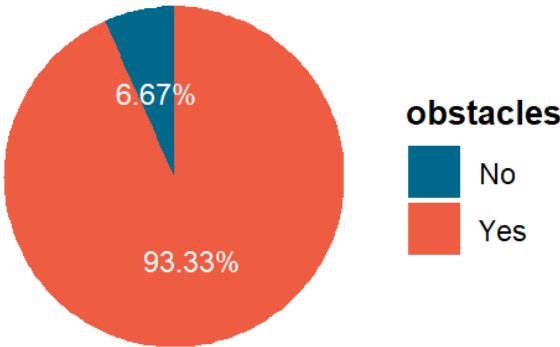
There is a need for more collaboration between educ



Have you faced any challenges or obstacles in hiring IT graduates in Goa? If yes or no, please elaborate.

NO	3	6.67%
YES	42	93.33%

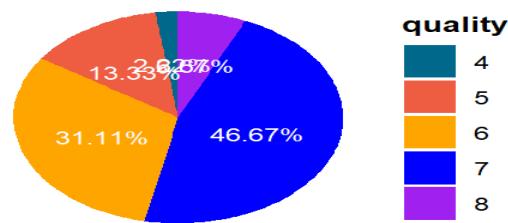
obstacles in hiring IT graduates in Goa.



How would you rate the overall quality of IT education in Goa?

4	1	2.22%
5	6	13.33%
6	14	31.11%
7	21	46.67%
8	3	6.67%

Quality of IT education in Goa.



Testing of Hypothesis

Industry Perspective :-

H0:-Null Hypothesis: According to an industry perspective, IT graduates in Goa have no different employment prospects.

H1:-Alternate Hypothesis: An industry perspective reveals that IT graduates in Goa have a different employment outlook.

Related Questions

- 1.Do you feel graduate students coming for interview are industry ready?
- 2.Would you say graduates are capable of adapting to any work environment and are willing to take on challenges?
- 3.Is the graduate student industry ready according to you as an employer? Do they possess the domain knowledge that companies require?
- 4.Do you believe graduates who join your team will be the best team members who work for you?
- 5.Do you believe that the employee you are in the process of hiring has good social skills?
- 6.Companies in Goa prefer to hire local IT graduates over those from other states.
- 7.The IT industry in Goa offers good career growth opportunities for IT graduates.
- 8.The IT industry in Goa provides competitive salaries to IT graduates.
- 9.The IT industry in Goa actively participates in the development and training of IT graduates.
- 10.The government of Goa supports the growth of the IT industry and employment of IT graduates.
- 11.There is a need for more collaboration between educational institutions in Goa and the IT industry to ensure the employability of IT graduates.
- 12.How would you rate the overall quality of IT education in Goa?

Faculty Perspective :-

Ho:- Null Hypothesis :- "Employability of IT graduates in Goa is not correlated with academic performance or educational background."

H1: - Alternate Hypothesis:-"Education and academic performance of IT graduates in Goa are significantly correlated with employment prospects."

Related Questions :-

1. How would you rate the quality of IT education and training in Goa?
2. How well do you think the IT curriculum in Goa prepares students for the job market?
3. How well do you think the IT curriculum in Goa prepares students for the job market?
4. Do you feel that Industry Connect is much needed to create good job prospects in Goa ?

5. Do you believe that IT education in Goa adequately prepares students for the employment market?
6. As Academician, Do you feel that IT graduates in Goa has good analytical skills which is needed by Industry?
7. Do you feel the IT grads are IT Job Market ready ?
8. How effective do you think internships are in enhancing the job prospects of IT students?
9. Do you think there is a demand for IT professionals in Goa?
10. How would you rate the overall employment prospects for IT graduates in Goa?
11. As academician , do you feel IT companies should consider local Goan students for job in Industry ?
12. In Goa, do you feel we have proper IT infrastructure to accommodate IT graduates?

Students Perspective : -

Ho: Null Hypothesis: -"Goa's IT graduates perceive no significant impact of their education and skills on their employment prospects."

H1: Alternative Hypothesis:-" Goan IT graduates perceive their education and skills as having a significant positive impact on their employment prospects."

Related Questions :-

1. What is your current educational status?
2. What is your perception of the employment prospects for IT graduates in Goa?
3. Are there sufficient job opportunities for IT graduates in Goa?
4. What are the main factors affecting the employment prospects of IT graduates in Goa? (Select all that apply)
5. Have you had any difficulty finding employment or internships in the IT sector in Goa?
6. Have you considered seeking employment opportunities outside of Goa?
7. If you answered yes to the previous question, what are the main reasons for considering employment outside of Goa? (Select all that apply)
8. Would you recommend IT-related courses to other students considering future employment prospects in Goa?
9. How confident are you in finding a job in the IT sector after graduation?
10. Have you participated in any career fairs or job recruitment events specific to the IT sector in Goa?
11. Please rate the effectiveness of such career fairs or job recruitment events in helping you secure job opportunities in the IT sector.
12. Do you think the IT sector in Goa provides enough job opportunities for IT graduates?
13. How do you plan to stay updated on industry trends and technological advancements in the IT field?
14. Are you aware of the current job market for IT graduates in Goa?
15. How would you rate the quality of IT education you have received in Goa?

Discussion

Industry Perspective :-

H0:-Null Hypothesis: According to an industry perspective, IT graduates in Goa have no different employment prospects.

H1:-Alternate Hypothesis: An industry perspective reveals that IT graduates in Goa have a different employment outlook.

```
data <- data.frame(score = c(8.88,57.78,13.33,0.00,20.00,22.22,60.00,8.89,4.44,4.44
),
  group = c(rep('graduate', 5), rep('environent', 5)))
data
```

```
data %>%
  group_by(group) %>%
  summarise(
    count = n(),
    mean = mean(score),
    sd = sd(score)
  )
```

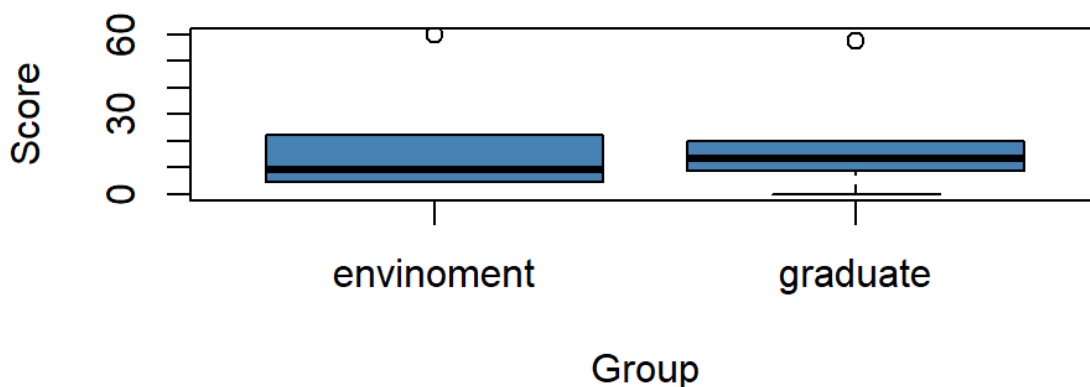
Output :-

A tibble: 2 × 4

group	count	mean	sd
<chr>	<int>	<dbl>	<dbl>
1 environent	5	20.0	23.5
2 graduate	5	20.0	22.3

```
boxplot(score~group,
  data=data,
  main="Test Scores by Group",
  xlab="Group",
  ylab="Score",
  col="steelblue",
  border="black"
)
```

Test Scores by Group



```
#define new vector for difference between post and pre scores
differences <- with(data, score[group == "graduate"] - score[group == "environent"])

#perform shapiro-wilk test for normality on this vector of values
shapiro.test(differences)
```

Shapiro-Wilk normality test

data: differences

W = 0.9816, p-value = 0.943

The p-value of the test is 0.943, which is greater than $\alpha = 0.05$. Thus, we fail to reject the null hypothesis that our data is normally distributed. This means we can now proceed to conduct the paired t-test.

```
t.test(score ~ group, data = data, paired = TRUE)
```

Paired t-test

data: score by group

t = -3.6827e-17, df = 4, p-value = 1

alternative hypothesis: true mean difference is not equal to 0

95 percent confidence interval:

-13.37925 13.37925

sample estimates:

mean difference

-1.774622e-16

The test statistic t is 3.6827e-17

The p-value for this test statistic with 4 degrees of freedom (df) is 1

The 95% confidence interval for the mean difference is (-13.37925,13.37925).

The mean difference between the scores for the pre and post group is -1.774622e-16

In conclusion, a p-value of 1 indicates that the observed data are entirely compatible with the null hypothesis and that there is no reason to reject it. It just indicates that there is no evidence against the null hypothesis in the data; it does not actively "support" the null hypothesis in the sense of proving it.

Academic Perspective :-

Ho:- Null Hypothesis :- "Employability of IT graduates in Goa is not correlated with academic performance or educational background."

H1: - Alternate Hypothesis:-"Education and academic performance of IT graduates in Goa are significantly correlated with employment prospects."

```
t.test(internship, IT_infrastructure)
```

Welch Two Sample t-test

data: internship and IT_infrastructure

t = -0.69511, df = 3.2459, p-value = 0.5335

alternative hypothesis: true difference in means is not equal to 0

95 percent confidence interval:

-71.84293 45.17626

sample estimates:

mean of x mean of y

20.00000 33.33333

The result indicates that the relevant p-value is 0.5335 and the t test statistic is -0.69511.

Since the p-value is greater than .05, it cannot be used to reject the null hypothesis, indicating that there is no relationship between the academic standing or educational background and the employability of IT graduates in Goa.

Students Perspective

Ho: Null Hypothesis: "Goa's IT graduates perceive no significant impact of their education and skills on their employment prospects."

H1: Alternative Hypothesis: "Goan IT graduates perceive their education and skills as having a significant positive impact on their employment prospects."

$z.test(x=employment, y=opportunity, mu=35, sigma.x=20, sigma.y=20)$

Two-sample z-Test

data: employment and opportunity

$z = -2.1433$, p-value = 0.03209

alternative hypothesis: true difference in means is not equal to 35

95 percent confidence interval:

-32.00608 32.00608

sample estimates:

mean of x mean of y

33.33333 33.33333

The two sample z-test test statistic of -2.1433 , together with the accompanying p-value of 0.03209, suggests that Goan IT graduates believe their education and abilities have a noteworthy positive influence on their career opportunities.

Conclusion :-

In order to take advantage of new prospects and overcome current obstacles, Goa's IT graduates must be empowered through a comprehensive strategy. For recent grads, the region's expanding IT sector—supported by government efforts and the entrance of technology firms—offers a promising future. The rise of startups, the development of digital infrastructure, and the rising demand for IT services from a variety of industries are important opportunities.

Graduates must contend with obstacles like the necessity of ongoing skill development, established tech hub competitiveness, and industry-specific knowledge requirements. Government agencies, business associations, and academic institutions must work together to address these issues. The skill gap can be closed and employability improved by initiatives including targeted training programs, industry-academia alliances, and supportive policies.

In conclusion, Goa may become a major IT hub that offers promising job opportunities for its graduates by creating an atmosphere that encourages innovation, skill development, and real-world experience. To succeed in this fast-paced and cutthroat industry, IT graduates must be devoted to lifelong learning and flexibility.

Future Recommendation:

Several deliberate measures can be put into place to further empower Goan IT graduates and improve their job prospects:

1. Increasing Cooperation Between Industry and Academics:

- Establish comprehensive internship and apprenticeship programs that give participants practical experience. Colleges and businesses should work together to provide these chances so that students can experience the working world and acquire real-world skills.
- Curriculum Alignment: Update academic curricula on a regular basis to take into account the most recent developments in technology and industrial trends. Academic leaders and industry specialists can serve on advisory boards to accomplish this.

2.Improving the Development of Skills:

- Technical Bootcamps and Workshops: Plan comprehensive instruction and workshops on cutting-edge technologies including blockchain, AI, machine learning, cybersecurity, and data analytics. Both recent graduates and current students should be able to access these.
- Certification Programs: To legitimise specific skills and improve employability, encourage participation in certification programs offered by reputable organisations

3.Encouragement of Innovation and Entrepreneurship:

- Establish and promote startup incubators and accelerators that offer cash, resources, and mentorship to technology-related firms. This will motivate graduates to go into business for themselves.
- Innovation Challenges and Hackathons: Organize frequent innovation challenges and hackathons to encourage students' and graduates' creativity, problem-solving abilities, and teamwork.

4. Increasing Prospects for Networking:

- Professional Networking Events: Plan gatherings, seminars, and parties to help recent graduates, business leaders, and prospective employees network. This may result in beneficial relationships and employment prospects.
- Alumni Networks: Make use of alumni networks to help recent graduates better navigate the job market by offering them career guidance and mentoring.

5.Support from the Government and Policies:

- Policies that encourage hiring locally should be put in place. Examples of such policies include tax incentives or subsidies for enterprises who hire IT graduates from the area.
- Investment in Digital Infrastructure: Keep making investments in this area to draw in more tech companies and generate employment opportunities.

6. Enhancement of Career Services:

- Comprehensive Career Counselling: Assist graduates in identifying their interests and strengths, matching them with industry requirements, and getting

ready for job interviews and career transitions by offering career counselling services.

- Job Placement Programs: To link graduates with companies actively seeking talent, educational institutions should strengthen their job placement programs.

By putting these recommendations into practice, Goa can provide a helpful environment that will help IT graduates not just overcome the obstacles they encounter today but also position them to take advantage of possibilities as the technology landscape changes.

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