CHAPTER 1: INTRODUCTION

In this ever growing , fast paced digital world where the entire globe has become a small global village, we as a human race have achieved and tasted remarkable success with the advent of information technology. The journey of creating a computer for faster calculation meant for military purposes to the evolution of internet, softwares, apps and high processing softwares designed to keep the digital world running has made sure that our growth as a human society is not just gradual but rather they are enthralling marches towards an exciting power packed digital transformation. This research thesis is specifically meant for IT professionals who are trying to figure out the market trends , for new budding IT professionals along with the ones who have just entered into the IT world hoping that they would make it big in the future.

People who have been closely following IT might be aware about how our entire networking system and our technologies have progressed over the years. Since the world wide web boom that happened in 1990-1991, we have witnessed a surge in people being part of this huge network. Millions of data are generated and giant companies relying on data are exploring ways to effectively cater to the needs of the masses. Transactional and bank systems have been digitized which has resulted in demand of a high and efficient process of transactions over the internet, minimizing loss in terms of money and providing maximum customer satisfaction. Maximum throughput by machines with minimum human interactions and himan efforts has been the motto throughout this digital development phase. There have been extensive efforts to train machines to help interact with humans through machine learning resulting in technologies like Chatgpt, Google Gemini and Apple Siri. The general consensus is that with such rapid developments in the field of technology , most jobs in the future would be taken up by AI hence creating a huge vacuum in the job market. The most recent AI development of Devin AI created a huge chaos and uproar among the software engineers community since it claimed to have high efficiency with respect to the tasks that were performed by human software engineers which were ultimately proved to be false. Web3 is making significant impact on the finance sector and there might be a slow yet lasting impact of a paradigm shift from web 2 to web 3 in out current world. All these events are just the tip of an iceberg which is well aware among the technological community.

Even though we have a general idea of all the information above, we still don't realize that there is a huge population of IT professionals who rely on technological changes and advancements and have based their livelihood based on the current technological scenario. Among them are the ones who create, develop, test and manage systems making sure that they don't fail , meet customer requirements and reap profits for the company. It is because of their consistent efforts throughout the years that we have been able to enjoy the convenience of sitting behind a phone screen and get our work done via a couple of clicks and touches. Often quoted as a field with lucrative packages, people often fail to realize the challenges faced by IT professionals on a day to day basis. This research will shed light upon the challenges faced by IT professionals and also about their perspective of the market ranging experience levels from 0-5 years.

This research will give us a clear picture of the socio economic aspects of IT professionals from a variety of work experiences (in years). The aim of this study is to learn how different aspects from different time periods can affect IT professionals and the steps needed to make sure that IT professionals and budding youths interested in IT can make sure that they can excel in this field.

This research can prove to be a good guide for people who are new to this industry and young kids who are willing to take up IT as their profession in the future. The study would help them understand the current industry trends and an overview about where our technological world is advancing and how they can equip themselves for the future developments that will occur. In the vast ocean of never ending knowledge, it is often possible to get lost or confused regarding where to start the journey. This research will also be an eye opening insight into the life of IT professionals, revealing key details and information about their perspective and experiences in the IT field.

CHAPTER 2: REVIEW OF LITERATURE

This chapter provides summarized information about at least 20 research papers related to the topic chosen for the research topic. Year, place, organization conducting the research, objective, sample size, result and recommendation are the topics covered below for each of the research papers.

1: Employee turnover: A study on Information technology sector: This research was conducted by Sumana Guha (St.Xaviers College) and Subhendu Chakrabarti from Indian statistical institute was published online on September 05,2024.

The objective of this study was to learn about factors influencing employee turnover in IT industries. The sample size for this research was about 460 IT employees working in 17 different IT firms in Kolkata, West Bengal. The primary source of information was obtained through snowball method particularly through the questionnaire method. The research culminated to a result which showed that higher salary followed by higher portfolio and higher brand name were the main factors for employee turnover. The recommendation put forth through this research paper was that companies should create a work environment which would make the employees feel that they would get ample opportunities to help them develop their career and give them clarity regarding their career path. This strategy along with creating emotional ties, recognition of talent and rewarding the employee with the right amount of pay would help the company retain their employees much better.

2: Employee turnover intentions and job performance from a planned change: the effects of an organizational learning culture and job satisfaction: This research was conducted by Chun-Yu Lin and Chung-Kai Huang from the International Journal of Manpower and was published on 18 July 2020. The research was focused in a particular restructured telecommunications company in Taiwan.

The objective of this study was to study the relationship between organizational learning culture(OLC), job satisfaction, turnover intentions and job performance during organizational change. The data for this research was collected by 434 employees in a restructured telecommunications company in Taiwan. Findings revealed that companies with higher learning culture and a better organizational learning culture had lower levels of turnover intentions. Moreover, employees who were part of such a vibrant culture were better satisfied with their jobs and exhibited better performance resulting in the company's growth. Even amidst challenges during organizational changes, such employees often took up those challenges and fulfilled all their duties with utmost honestly and diligence. The research suggested companies to take up a better organizational learning approach and integrate it into their work environment so as to achieve higher employee retentions.

3: The Role of Information Technology in Driving Innovation and Entrepreneurial business growth: This research is conducted by a group of individuals and was published online on 2 June 2023 in Indonesia as part of a university program. The objective of this study was to study the impact on information technology in driving innovation and bringing out development in entrepreneurial businesses.

There was no primary source of data used for the investigation rather researchers relied on secondary sources of data such as digital media and scholarly databases. Data from 54 unique sources were collected, organized and studied. The sample size of data is unknown since the data collected were secondary source of information compiled from different sources. The result shed light on how IT propels certain industries, with points covering on topics like accelerating product and service development, improving operational efficiency, increasing market accessibility, driving business innovation, facilitating digital transformation, fostering collaboration and team building, improving customer experience and addressing privacy and security challenges. The nature of the study was exploratory and hence there were no specific recommendations made by the researchers of this topic.

4: Effect of occupational stress and remote working on psychological well being of employees: An empirical analysis during covid-19 pandemic concerning IT industry in Hyderabad: This research was conducted by Dr.KDV Prasad, Dr. Rajesh W. Vaidya and Dr. Mruthyanjaya Rao Mangipudi based in Hyderabad and this research paper was published on 31st May 2020 during the Covid lockdown period.

The objective of this study was to study the psychological well being of IT employees In Hyderabad due to occupational stress and remote working on the onset of Covid. The empirical study was based on a number of independent factors and dependent factors to measure the outcome of the research. A sample size of 400 was taken into consideration and multiple regression analysis results revealed that several independent factors included in the study like peer, role ambiguity, work environment and job satisfaction had major impact on the psychological well being of employees. Recommendations provided by the research group included points like maximum remote working facilities for the employees in order to exercise healthy psychological well being of employees in all sectors.

5: The role of IT-based technologies on the management of human resources in the Covid-19 era: This research was conducted by Sahar Vahdat who is a health care worker based in Iran and the research was published on 24 September 2021. The objective behind this study was to conduct an extensive research on how IT based technologies will bring about changes in the human resource management system after the covid.

The sample size of the study remains unknown since it depends on secondary sources such as articles related to the research topic. Factors like cloud computing and teleworking has been discussed and how it has impacted the HR management systems in response to the challenges posed by the pandemic. The research topic concludes by stating how IT based solutions should be adopted in HRM, to ensure better throughput in businesses and also to ensure customer and employee satisfaction.

6: People management skills, employee attrition, and manager rewards: An empirical analysis: This research study was conducted by Mitchell Hoffman and Steven Tadelis and the research paper was published in 2021 in the Journal of Political Economy. It sheds light on how managerial interactions and skills affect employee turnover in firms.

The objective of this study is to understand employee turnover with respect to managerial skills and relations as the parameter. The sample has been collected from a large high tech firm but the exact sample size is unknown. Findings revealed that skilled managers often contributed to low employee turnover. But skilled management alone doesn't contribute to low employee turnover and is showcased as just a factor among many others. Recommendations included hiring skilled and proficient managers who can lead the team effectively so as to create a sense of security and calmness among the employees.

7: The Influence of Information Technology Users, Employee Empowerment, and Work Culture on Employee Performance at the Ministry of Law and Human Rights Regional Office of Riau Islands: This research was conducted by a group of researchers based in Riau Islands and was published in 2022. The study examines the influence of IT on employee performance at the Ministry of Law and Human Rights Regional Office.

The sampling technique used by the researchers is the Simple Random Sampling Technique and the data collected was through a questionnaire. This descriptive study with the help of various hypotheses found out that information technology, employee empowerment and work culture play a positive and significant role in the employee performance in the ministry. Recommendations based on the above factors have been provided by the researchers in the research paper for the same. These 3 hypothesis forms the basis for all the recommendations in this study.

8: Information technology solutions, challenges and suggestions for tackling the COVID-19 pandemic: This research study was published by a group of researchers on 9 December 2020. The objective of this study is to help people realize how information technology systems can be used to fight the obstacles, overcome challenges that pose great concerns for the human race during the pandemic. It provides a positive outlook on how we can use IT systems and conduct more research in the IT field in order to make human life more easier after the pandemic.

The study is heavily based on secondary sources of information and provides a future insight rather than providing descriptive or inferential information about a particular set of data. Since the nature of this study doesn't contain a sample size, there are no particular conclusions but a set of recommendations and how existing technologies can be used to innovate and develop systems which would help the healthcare systems to work efficiently and provide better healthcare to people all around the world.

9: Effectiveness of E-Training, E-leadership, and Work Life Balance on Employee Performance during COVID-19: This research was by a group of researchers in Journal of Asian Finance and was published on 28 October 2020. The study was particularly based in Jakarta , Indonesia. The objective of this study was to tap into the effectiveness of e-training, e-leadership, work-life balance and work motivation on millennial generation employees' performance at one of Honda motorcycle dealers in Jakarta, Indonesia.

200 sample sizes for the research study was taken into consideration and the side probability method was used for sampling. Data was collected through questionnaires and findings revealed that e-training, e-leadership, work-life balance and work motivation had a positive effect on work motivation on millennial employees of the firm. Recommendations were based on the findings promoting all of the above factors to reduce employee turnover and maximize employee retention.

10: The relationship between quality of work life and work-life balance mediating job stress, job satisfaction and job commitment: evidence from India : This research study was conduction by a group of researchers from journal of advances in management research and was published on 1 August 2020. The objective of this study was to study the relationship between Quality of Work-Life (QWL) and Work-Life Balance (WLB).

A sample of 445 was collected from a cosmopolitan city in southern India. Findings revealed that QWL has an inverse impact to job stress, direct impact to job satisfaction and direct impact to job commitment. The study also displayed that WLB has an inverse impact on job stress, direct impact on both job satisfaction and job commitment. Recommendations included on how firms should make sure that they foster an environment conducive to work life balance and quality of work life.

11: Employees' Perceptions of the Implementation of Robotics, Artificial Intelligence, and Automation (RAIA) on Job Satisfaction, Job Security, and Employability: The research paper published on 12 August 2020 by Amisha Bhargava, Marais Bester and Lucy Bolton aims to understand employees' perspective on how automation, AI and robotics are affecting their experience at work and their personal opinion for the future of their work.

The method of this research to collect the sample was semi-structured method conducted with 21 participants varying from face-to-face, telephonic to video call. Findings revealed that the respondents used AI and ML terms interchangeably which is not conceptually correct. They also expressed the opinion that robots are not capable of making decisions on their own and hence high level jobs cannot be replaced by robots. Recommendations suggested that even though respondents in the study were confident about their skill sets but still they need to upgrade their skills with respect to the latest

technology and get more equipped with the concepts of AI and ML to excel in their respective fields.

12: Job insecurity, job instability, and job satisfaction in the context of the Covid-19 pandemic: This study done by a group of researchers was published online on April 2021, one year after the pandemic induced a world wide lockdown. The aim of the study was to find the job insecurity and job instability during the covid-19 pandemic along with job satisfaction in the market.

The sample size for this particular study consisted of 568 employees in Romania. The results showed a direct positive relation between job instability and employee insecurity in increased competition. Job insecurity was shown to manifest a negative correlation with regard to job satisfaction. Recommendations suggested that the HR of all the respective companies should find ways to make sure that the employees don't feel the brunt of the work pressure amidst the pandemic and take better efforts to make sure that the relation between employees and higher officials are smooth so as to gain maximum work efficienct from the employees.

13: What affects employee performance through work motivation: This study was conducted by a group of researchers based in Indonesia and was published on 2021. The aim of this study was to understand the influence of work competence and workload on employee performance through work motivation of employees who work in state owned bodies.

Using a sample of 55 employees, the research finds that competence positively impacts both motivation and performance, while workload has a negative effect. Motivation itself is also a key driver of improved performance. The study recommends that organizations enhance employee competence and effectively manage workloads to boost motivation, which in turn can lead to better performance and organizational success.

14: The Adoption of Artificial Intelligence in Employee Recruitment: The Influence of Contextual Factors : This study, examines the role of AI in human resource management, specifically in employee recruitment. Published in 2023, the research applies the Technology, Organization, and Environment (TOE) model and integrates it with transaction cost theory to identify the factors that either promote or hinder AI adoption among companies.

Using survey data from 297 Chinese companies, the study found that perceived complexity in using AI negatively impacts AI adoption, whereas technological competence and regulatory support encourage it. Interestingly, factors like the relative advantages of AI technology, company size, and industry type did not significantly influence AI usage. Additionally, transaction costs were shown to moderate the effects of technological complexity and organizational technology competence on AI adoption. The study suggests companies need to focus on reducing complexity and enhancing their technological capabilities to promote the use of AI in recruitment processes.

15: The Effect of Leadership Style and Work Motivation on Employee Performance: This research paper was published in 2023 and conducted in Indonesia. The objective of the study was to analyze the impact of various leadership styles—transformational, transactional, and

laissez-faire—on employee performance, while also exploring the mediating role of work motivation in this relationship. The sample size included 150 employees from various sectors, allowing for a comprehensive analysis of the dynamics at play in different organizational contexts.

The results indicated that transformational leadership significantly enhances employee performance, primarily through fostering intrinsic motivation among employees. In contrast, transactional and laissez-faire leadership styles showed less impact on performance outcomes. The authors recommend that organizations implement training programs to develop transformational leadership skills and create a motivational work environment, suggesting that these strategies can lead to improved employee performance and overall organizational success.

16: The Influence of Salary Compensation on Employee Performance in Shengshitongda: A Qualitative Investigation : This research paper was published in June 2023. The objective was to explore how salary compensation impacts employee performance in a leading logistics company in China, Shengshitongda. The study utilized a qualitative approach involving in-depth interviews with employees, though the specific sample size is not mentioned.

Results indicated that salary compensation significantly affects employee motivation and performance. A fair and transparent compensation system boosts employee satisfaction and loyalty, while perceived inadequacy leads to lower job satisfaction and productivity. The authors recommend that human resource managers develop comprehensive compensation systems that consider both financial and non-financial benefits, such as career development and work-life balance, to effectively attract and retain talent.

17: Rebooting Employees: Upskilling for Artificial Intelligence in Multinational Corporations: The chapter "Rebooting Employees: Upskilling for Artificial Intelligence in Multinational Corporations" was published in 2023. It aims to examine the impact of AI on workforce skills and the necessity for upskilling within multinational corporations. The study emphasizes the need for comprehensive training programs to ensure employees are equipped to work alongside AI technologies effectively.

The authors highlight that successful upskilling can lead to improved job satisfaction and productivity while fostering a culture of continuous learning. They recommend integrating AI education into corporate training strategies to better prepare employees for future challenges.

18: Artificial Intelligence: The Human Resource Management (HRM) Revolution : The chapter titled "Artificial Intelligence: The Human Resource Management (HRM) Revolution," published in 2023, examines the significant influence of AI on HRM practices, highlighting the challenges related to ethics and data privacy. While it does not specify a sample size, it emphasizes the importance of HR professionals adapting to technological changes and their implications on workforce management.

The chapter suggests that organizations should focus on enhancing employee engagement and implementing continuous training programs to effectively integrate AI into HRM

strategies. This proactive approach is essential for leveraging AI's benefits while addressing potential concerns associated with its use in the workplace.

19: Learning organization and work engagement: the mediating role of employee resilience: The research paper published in 2018 investigates the impact of organizational commitment and employee engagement on knowledge sharing within teams across various industries. The study utilizes data from employees in different sectors to assess how these factors influence knowledge-sharing behaviors and overall organizational performance.

The findings reveal that both organizational commitment and employee engagement significantly promote knowledge sharing, ultimately enhancing performance outcomes. The authors recommend creating a supportive work environment to encourage knowledge exchange among employees, thereby facilitating better collaboration and improved organizational effectiveness.

20: Personality, self-efficacy and job resources and their associations with employee engagement, affective commitment and turnover intentions: The research paper published in 2017 examines the relationship between leadership styles and employee well-being in the context of change. It highlights how different leadership approaches, such as transformational and transactional leadership, influence employee perceptions of well-being during organizational transitions. The study emphasizes that supportive leadership can enhance employee resilience and coping strategies in times of change.

The authors recommend organizations focus on developing leaders who can foster supportive environments, thereby improving employee well-being during periods of transition.

CHAPTER 3: RESEARCH GAP

From the above review of literature, there is a clear gap of the perspective of IT employees with respect to the job market prevalent in Mumbai. The above literatures provide information and analysis of employees from different fields and not just IT and is focused on other countries.

From the review of literature related to IT, the perspective of employee retention has been explained more in terms of human resource management, no direct involvement or data collection from the employees working directly in the IT related fields can be seen throughout these literatures.

CHAPTER 4: OBJECTIVES OF THE STUDY

The objective of the study are as follows

- To understand the IT job market from the perspective of IT employees
- Learn about their challenges
- Their transition from education to a fully real life corporate environment

- The steps they are taking in order to survive in this changing IT world
- Their future vision regarding the IT industry
- Understanding the culture and work environment of those IT employees
- Views regarding the 70 hour work week prepared by Narayan Murthy

CHAPTER 5: LIMITATION OF THE STUDY

This study only covers a small portion of India and the same findings can't be applied elsewhere since this study focuses more on an individual level and not on an overall industrial perspective. Problems for employees might not be same across the globe even though it is possible to find commonalities and patterns.

The research study only focuses on the time frame pertaining to 2024 and the responses might be heavily influenced by the prevalent job market and economy. Further studies during different job market phases would help researchers better understand the difference in responses between different phases of economic and technological advancement would help researchers better understand about the overall perspective of IT employees during different phases of the global market.

CHAPTER 6: SCOPE OF THE STUDY

The scope of the study covers the following points:

- To understand the IT job market from the perspective of IT employees
- Learn about their challenges
- Their transition from education to a fully real life corporate environment
- The steps they are taking in order to survive in this changing IT world
- Their future vision regarding the IT industry
- Understanding the culture and work environment of those IT employees
- Views regarding the 70 hour work week prepared by Narayan Murthy

The study specifically focuses on IT employees working in Mumbai ranging from 0-5 years. The study focuses on factors like job satisfaction, challenges, education quality, job market, perspective on AI, work-life balance, work culture, and perspective about the 70 hour work week proposed by Narayan Sathyamurthy. A sample of 35 responses were collected to conduct this study from job roles ranging from data analysts, IT consultants and software engineers.

The study was conducted from a time period of August 2024 to November 2024 and the responses are clearly influenced by the current job market scenarios and the overall IT industry situation in the country.

CHAPTER 7: HYPOTHESIS

The study examines the socio economic conditions and challenges that IT employees face in the IT industry in Mumbai . This study also shows the perspective of IT employees about the job market and topics which would contribute to changes in the IT industry. This chapter focuses on the various hypothesis tests that were carried out for this study along with various multivariate and univariate analysis carried out on different variables from a sample of 35 responses. Since most of the hypotheses test deals with 2 categorical variables, chi square test was conducted to test the hypothesis.

1: Relation between job role and job market perspective

Null hypothesis (H0) – There is no relation between job role and the perspective of job market in the present world.

Alternate hypothesis (H1) – There is a significant relation between job role and the perspective of job market in the present world.

The variables taken into consideration are ‘What is your current job role?’ and ‘Do you think it has become more difficult to find jobs in this current scenario as compared to your phase?’. A heat map displaying a clearer visualization of the job market scenario from different job roles based on the responses are also carried out.

2: Relation between job role and education satisfaction

Null hypothesis (H0)—There is no relation between job role and education satisfaction.

Alternate hypothesis (H1)--- There is a significant relation between job role and education satisfaction.

The variables taken into consideration are ‘What is your current job role?’ and ‘How well do you think your education prepared you for your current job in the IT industry?’

A pie chart displaying the data for education ratings for each of the job role is also carried out to better understand the scenario of education satisfaction among employees of different job roles.

3: Relation between number of work hours per week and perspective of a 70 hour work week

Null hypothesis (H0)--- There is no relation between the number of work hours per week spent by the employees and their perspective of a 70 hour work week.

Alternate hypothesis (H1)-- There is significant relation between the number of work hours per week spent by the employees and their perspective of a 70 hour work week.

A heatmap for better visualization about responses related to both the categorical variables are provided to understand the hypothesis test better.

A univariate analysis about the frequency of different challenges faced at the current role obtained from different responses are also provided.

A univariate analysis about the satisfaction levels about the current job market in Mumbai among the employees are also provided.

A univariate analysis about the major techniques and methods used by employees to keep upgrading their skills in order to survive in the IT industry.

4: Relation between job role and perspective about automation affecting the job market

Null hypothesis (H0)--- There is no relation between job role and the perspective of employees about automation affecting the job market.

Alternate hypothesis (H1)--- There is significant relation between job role and the perspective of employees about automation affecting the job market.

A heatmap for better visualization about responses related to both the categorical variables are provided to understand the hypothesis better.

5: Relation between job role and the challenge level to keep up with upcoming trends

Null hypothesis (H0)--- There is no relation between job role and the challenge level faced by employees to keep up with upcoming trends.

Alternate hypothesis (H1)— There is a significant relation between job role and the challenge level faced by employees to keep up with upcoming trends.

A heatmap for better visualization about responses related to both these variables (one being categorical and the other being ordinal) are provided to understand the hypothesis better.

6: Relation between challenge level to keep up with upcoming trends and future plan of the employee after 5 years

Null hypothesis(H0) – There is no relation between the challenge level to keep up with upcoming trends and future plan of the employee after 5 years

Alternate hypothesis (H1) --- There is a significant relation between job role and the challenge level faced by employees to keep up with upcoming trends.

A heatmap for better visualization about responses related to both these variables (one being categorical and the other being ordinal) are provided to understand the hypothesis better.

7: Relation between work culture and employees opinion on the proposed 70 hour work week proposed by Narayan Sathyamurthy

Null hypothesis(H0)—There is no relation between the work culture and the employees opinion on the proposed 70 hour work week proposed by Narayan Sathyamurthy.

Alternate hypothesis (H1) – There is a significant relation between the work culture and the employees opinion on the proposed 70 hour work week proposed by Narayan Sathyamurthy.

A heatmap for better visualization about responses related to both these variables (both data being ordinal) are provided to understand the hypothesis better.

CHAPTER 8: RESEARCH METHODOLOGY

The types of research in research study are as follows:

1: Basic research – Study conducted for expanding knowledge and understanding of a particular subject.

2: Applied research- Uses knowledge gained from basic research and aims at solving certain problems.

3: Exploratory study- Study that revolves around a subject about which prior information or research papers are not known

4: Descriptive research – This study aims to describe characteristics, events systematically.

5: Causal research – Investigates cause and effect relationships , explaining why certain phenomena occur and contains experimental settings.

5: Evaluation research – Assesses the effectiveness of policies , programs and products. Often used in policy making and management.

This study consists of a mix of different research categories because of its research nature. Following listed below are the set of research categories that fit into the category of this research study.

1: Applied Research – This study seeks to address the practical issues IT employees face (eg: challenges in the transition from education to the workplace and survival strategies in the industry) and hence it is applied in nature. The study aims to transform the practices and operations prevalent in the IT industry by helping managers and HR teams make informed decisions to help with the mental health of IT employees.

2: Descriptive Research – Since the study examines broad aspects of socio-economic conditions, such as job market perspectives, work culture and long term -career views, making it descriptive.

3: Exploratory research – Since the study uncovers attitudes and challenges IT employees face, this might lead to unexpected outcomes. Hence this study has a tinge of exploratory research.

4: Qualitative research – The responses and data obtained from the study are mostly qualitative data since the research deals with the attitude and emotions of IT employees.

Sampling methods used: The sampling methods used in this research study are as follows

1: Convenience Sampling- This study was conducted by collected with responses from participants who were readily available within professional and social networks.

2: Voluntary Response Sampling- Since responses are obtained from google form, participation is voluntary for people who are willing to contribute to the study.

Big population data : The data collected from this study contained 35 responses from IT employees based in Mumbai. Data was collected from a google form and data used was through convenience sampling and voluntary response sampling.

Sample descriptions : The average age of participants would range from 21-25 considering that the participants have work experience from 1-5 years in the IT industry.

The participants in the survey have an educational qualification not below a bachelor's degree with a few of them with an engineer's and a masters degree.

The occupation of the participants are based in the IT industry with job roles consisting of data analyst, software engineer, IT consultant, system administrator etc.

The experience level of the employees are from 1 to 5 years.

The sample size of the study is 35 and is specifically with respect to Mumbai.

Employees from IT industry who were entry level and mid level professionals were the ones eligible for the study since the study is purely based on the perspective of IT employees.

Time and money involved : Conducting this study required meticulous time and no cost was incurred since the data collected were through google forms as primary source of information. Collecting the data required significant time along with data processing, data cleaning and data analysis making the whole study a time demanding process.

Expected outcomes: The expected outcome of this research study is a comprehensive study of socio economic experiences and challenges faced by IT employees in Mumbai from 0-5 years of experience. By examining factors such as job satisfaction, career aspirations, work-life balance and responses to industry pressures, the study aims to identify key trends and areas of concern among early professionals in the sector. Insights gained from this research can help employers, educators and policy makers better support IT employees transition from education to workforce, address the issues impacting retention and job satisfaction and

adapt workplace practices to foster an environment to nurture the mental and professional growth of the employees.

Summarized findings: The analysis consisted of some univariate analysis and some hypothesis tests revealing key findings about employee behaviour and their outlook towards the IT market and other factors impacting IT industry as a whole. A detailed explanation of all these findings will be displayed in the upcoming chapter called research findings.

CHAPTER 9: SIGNIFICANCE OF THE STUDY

The study sheds light on the perspective about IT professionals mostly who are freshers to mid-level professionals about the whole work culture, the social topics related to IT professionals and their opinion about the recent and latest trends taking over the IT industry. While there is a lot of chatter about various things happening in the IT industry, it is really important to understand what real professionals think about the various incidents happening in the IT world. This would give us a clear and filtered idea not only about the work culture and their professional conditions but also would help us get rid of the outside noise affecting the IT industry as a whole.

The findings of the study are crucial for multiple people

1: Organizations and Managers: The results would help the managers and organizations to better understand the stand and take on various topics from IT employees and thereby implement better policies to help in the mental growth and professional growth of the IT employees

2: Policy Makers: In a country like India where there are no strict laws for employees, it has become extremely important to keep the mental health of employees at check. This study if conducted on a larger scale will help the policy makers to make better decisions and arrive at a feasible conclusion before passing any law related to employees rights.

3: Aspiring IT students: This study aims at helping future young assets who will contribute to the country's economy by being a part of this never ending IT industry. This study will help them learn better about the current job market scenario and the opinion of people who are actually part of the IT culture about various topics that are considered to be the future of the IT world. Students will be enlightened about how to better equip themselves before diving into the IT world and how to survive and succeed forward in their professional life

4: Future research : This study will help future research studies to link it to various organizational practices or studies related to employee perspectives on other industries as well.

CHAPTER 10: RESEARCH FINDINGS

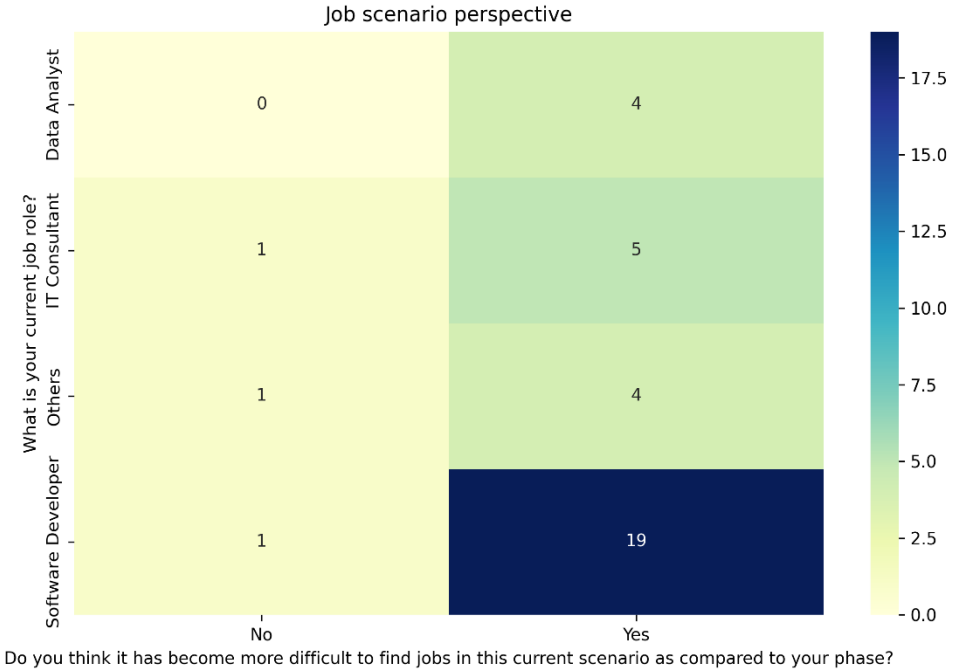
Research findings consists whether any relationship between the variables in each hypotheses testing and their respective heatmap plots between the variables. The alpha or better known as level of significance (threshold probability of incorrectly rejecting the null hypothesis) is 0.05 (5%).

1:Findings for the relation between job role and job market perspective:

The variables taken into consideration for this hypothesis test were 'What is your current job role?' and 'Do you think it has become more difficult to find jobs in this current scenario as compared to your phase?'. This hypothesis test aimed at finding any relation between the job role and the perspective about the job market. A chi-square test was conducted since both the variables were categorical in nature.

A p-value of (0.5) which is greater than alpha (0.05) suggested that the null hypothesis is accepted and that there was no relation between the 2 variables.

A heatmap plotting both the variables displayed and affirmed the above results of the hypothesis test.



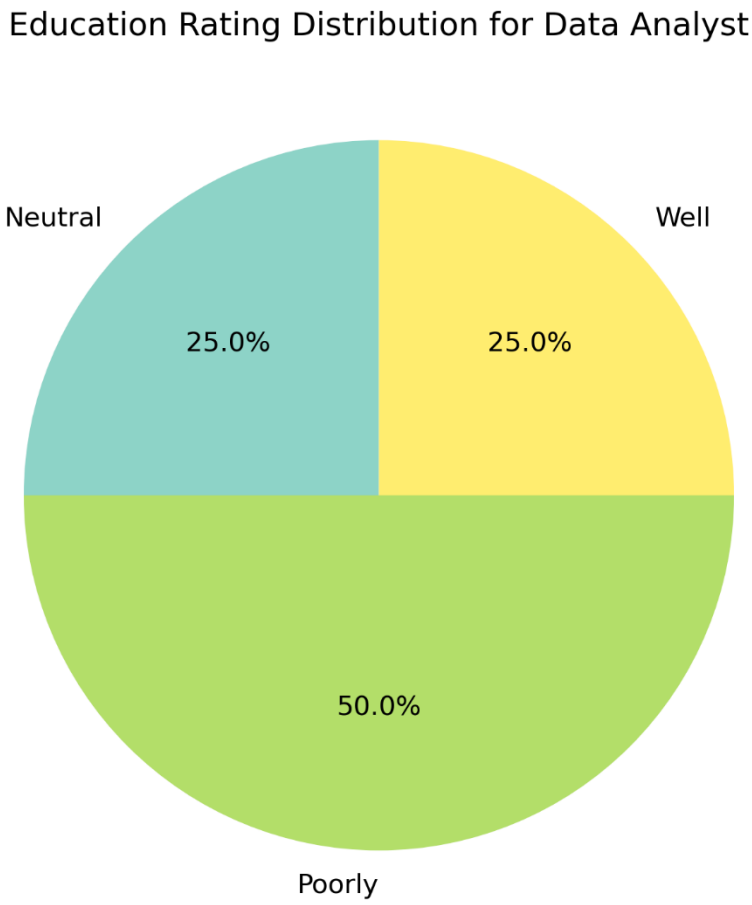
The above heatmap gives us a clear representation that despite the job role, majority number of participants in every job role felt that the current scenario for job market is much tougher compared to the past.

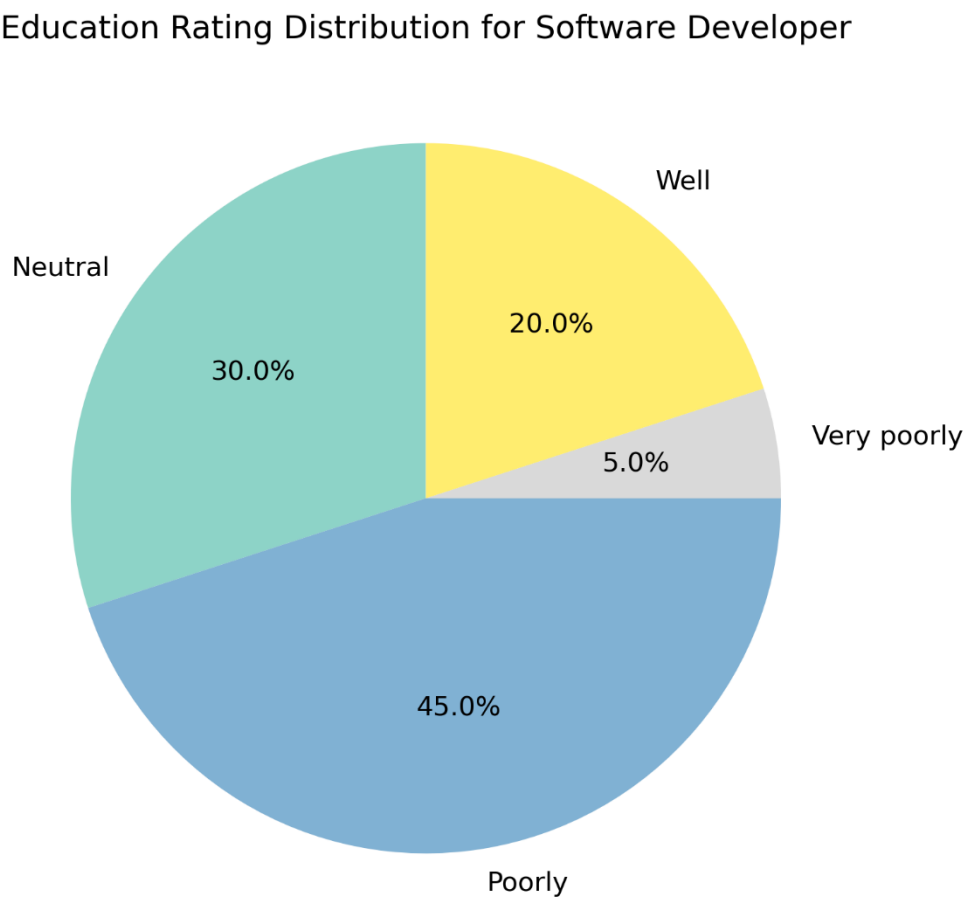
2:Findings for the relation between job role and education satisfaction:

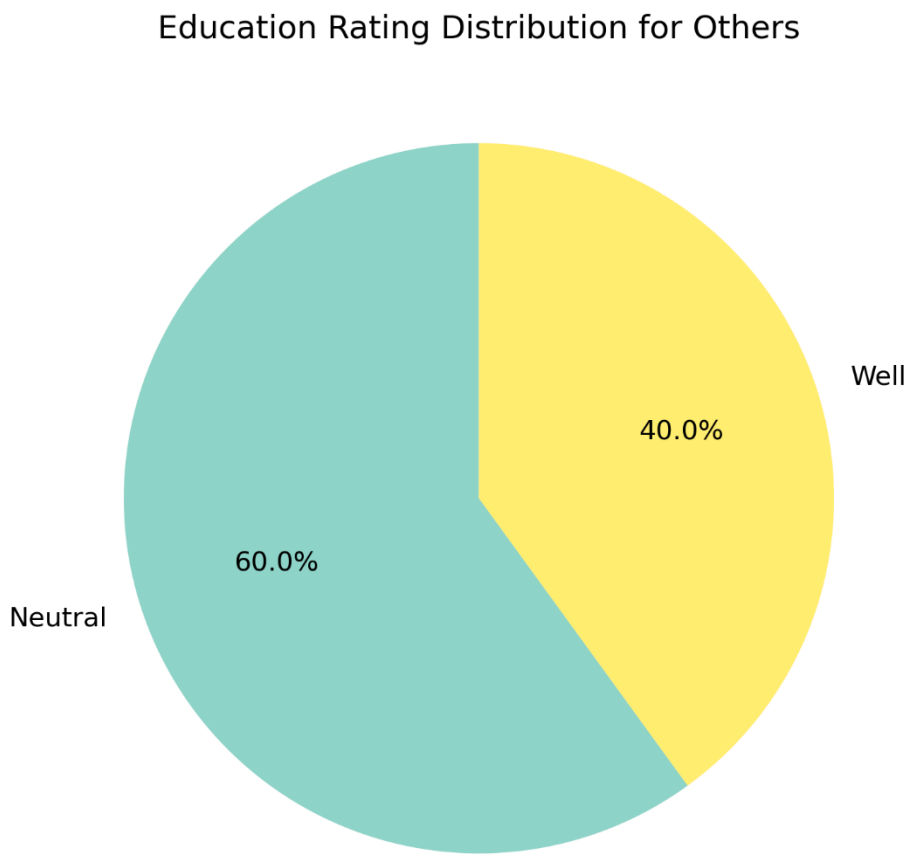
The variables taken into consideration for this hypothesis test were ‘What is your current job role?’ and ‘How well do you think your education prepared you for your current job in the IT industry?’. The hypothesis aimed at finding any relation between these 2 variables and a chi square test was conducted for the same.

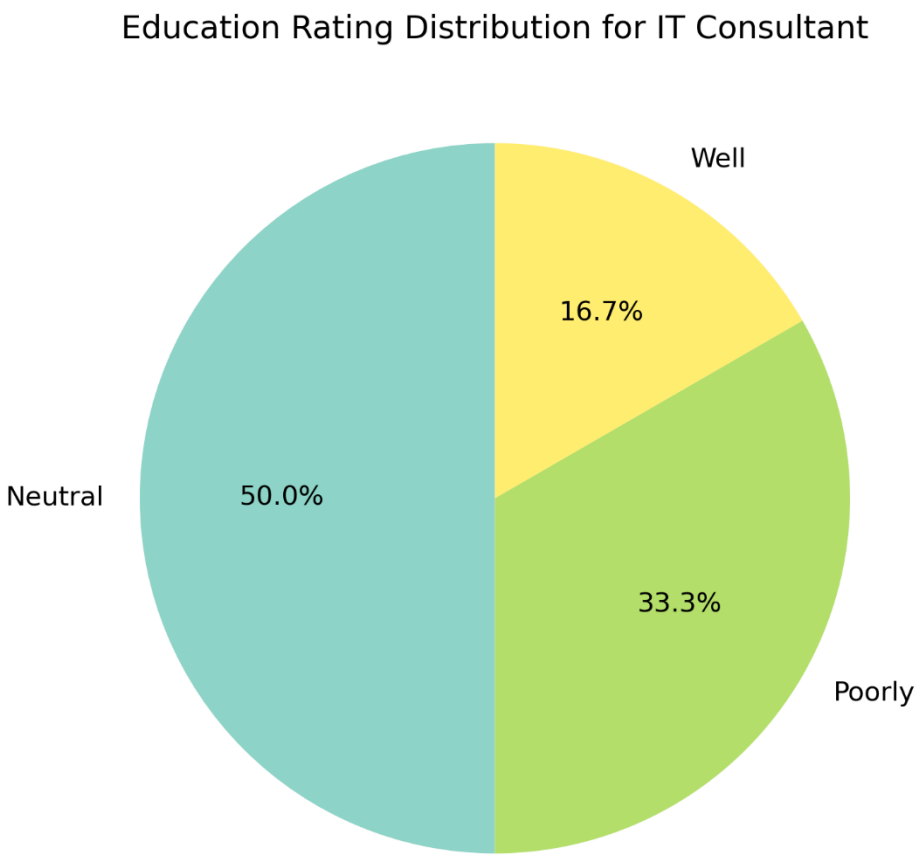
A p-value of 0.801 which is greater than alpha (0.05) indicates that the null hypothesis should be accepted and hence it was revealed that there was no relation between the outcome of job role and their views on the quality of the education.

A piechart plotting the above variables displayed and affirmed the results of the hypothesis test.




Education Rating Distribution for Software Developer
Well
20.0%
Very poorly
5.0%
Poorly
45.0%
Neutral
30.0%


Education Rating Distribution for Others
Well
40.0%
60.0%
Neutral



The above pie charts reveal the percentage distribution of education satisfaction for each job role. Each job role displays a different percentage distribution for each options but the one common pattern remains the same throughout. No job role displayed a single majority of participants agreeing on the fact that the quality of education was satisfactory for them to succeed in their professional life. Most of the values revolve majorly around neutral and poorly suggesting that majority of participants from each job role didn't find the education level satisfactory enough.

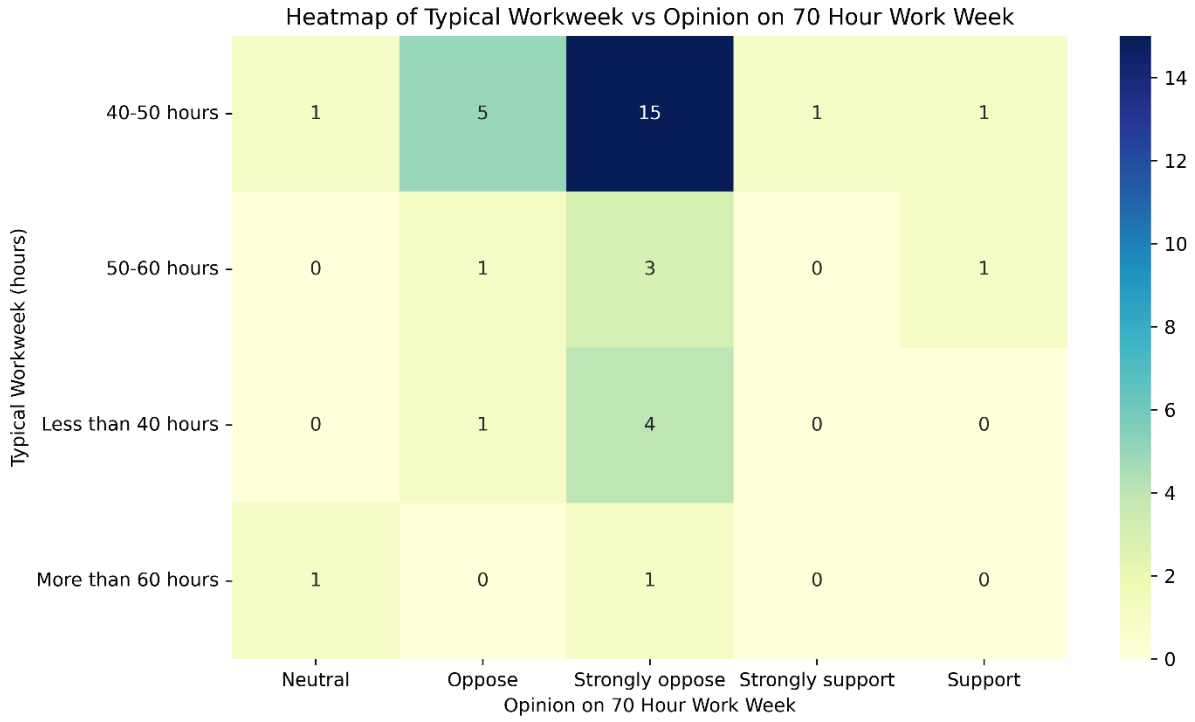
While other job roles showed signs of disappointment, 5% participants who work as software engineers felt that the education system was below par and extremely poor for them to succeed in their professional life.

3: Findings to find relation between number of work hours per week and perspective of a 70 hour work week :

The variables taken into consideration are ‘What is your typical workweek in terms of hours?’ and ‘What is your opinion on the proposed 70-hour workweek by Narayan Sathyamurthy?’. For both these categorical variables a chi square was conducted in order to find if there was a relation between these 2 variables.

A pi-value of 0.5 which is greater than alpha (0.05) suggests that the null hypothesis would be accepted. Hence there is no relation between the workweek hours and the opinion about a 70 hour work week proposed by Narayan Sathyamurthy.

A heatmap plotting both the variables are displayed to better understand the outcomes from the study.



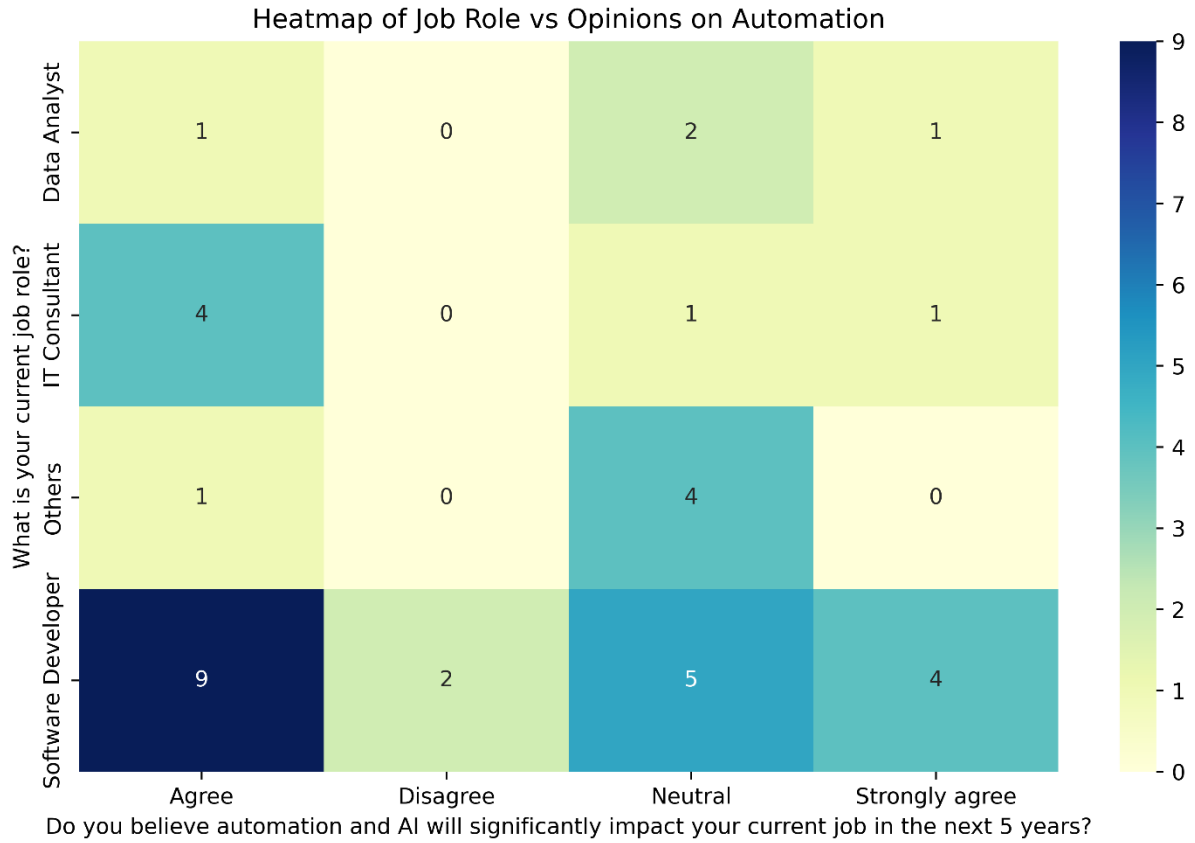
The heatmap plotted above gives us a clear idea that irrespective of the work hours most people tend to oppose the 70 hour work week theory put forward by Narayan Sathyamurthy. But we can see some exceptions too. For eg: There are 1 employee each from 40-50 hours workweek range who are neutral, supportive and strongly supportive of a 70 hour work week. An employee having a work week ranging from 50-60 hours is also in favour of the 70 hour work week. There seems to be an even distribution of participants in more than 60 hours with one participant being neutral about the 70 hour work week and one participant strongly opposing the 70 hour work week.

4: Findings to find the relation between job role and perspective about automation affecting the job market:

The variables taken into consideration are ‘What is your current job role?’ and ‘Do you believe automation and AI will significantly impact your current job in the next 5 years?’. A chi square test was conducted to find the relation between these 2 variables.

A p-value of 0.45 which is greater than alpha (0.05) suggests that the null hypothesis can be accepted. Hence there is no relation between the job role and the employee’s perspective about automation affecting the job market.

A heatmap plotting the two variables are displayed to better understand the distribution of data between the values



From this heatmap we can realize that irrespective of the job role, most of the responses are based on values around agree and neutral. This means that participants from each job role had mixed opinions about their job getting impacted by automation. Most of them agreed the fact that AI will significantly impact their job market and few of them were neutral about the automation affecting the job role. Apart from 2 participants who are software developers, nobody seemed to disagree on the fact that automation will play a huge role in their job in the future.

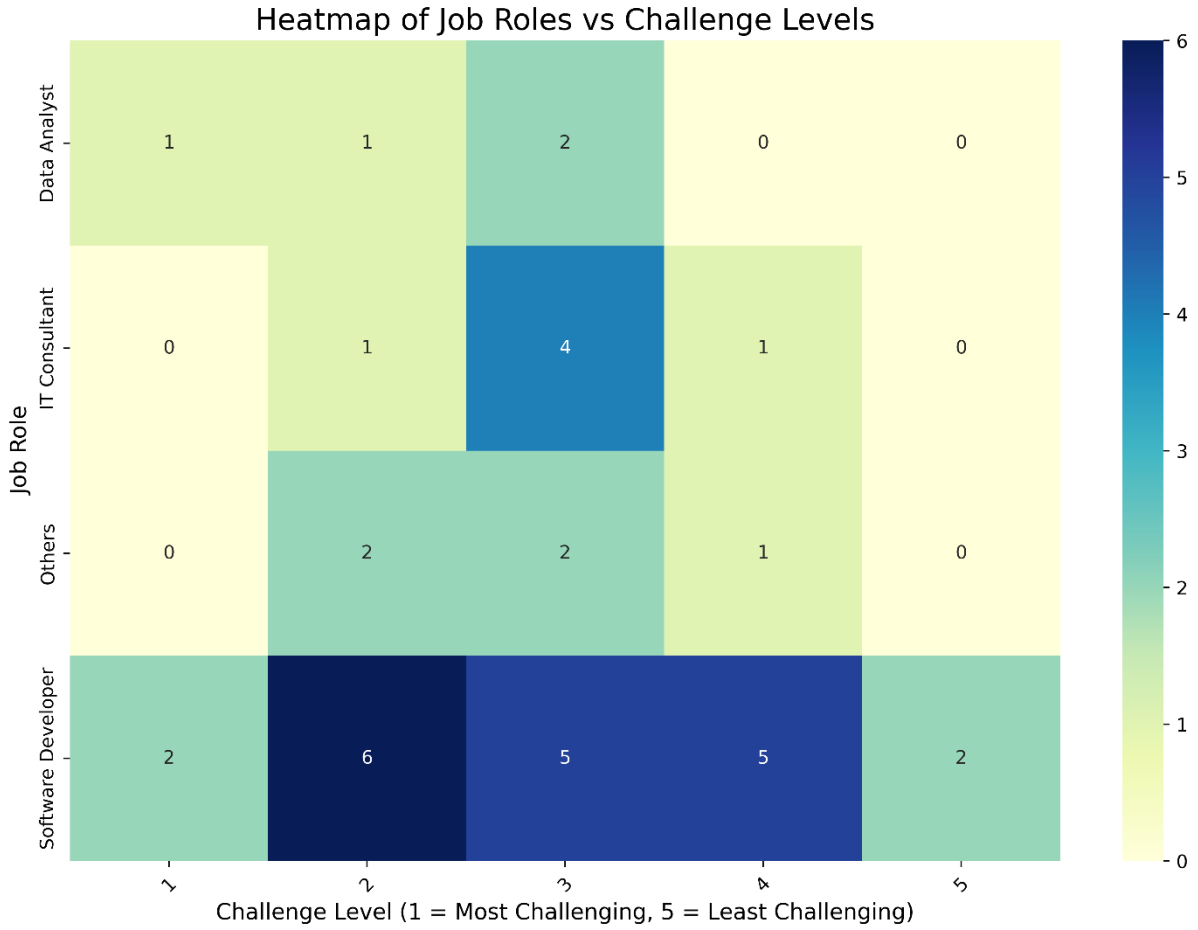
5: <u>Findings on the relation between job role and the challenge level to keep up with upcoming trends:</u>

This hypothesis test was conducted on 2 variables namely ‘What is your current job role?’ and ‘On a scale of 1 to 5, how challenging is it to keep up with the rapidly changing technology landscape with 1 being the most challenging and 5 being the least challenging?’.

Since one of the variables was ordinal , Kruskal-Wallis test was conducted to check the hypotheses.

A p-value of 0.67 which is greater than alpha (0.05) indicates that the null hypothesis will be accepted. Hence there is no relation between job role and the difficulty level faced by the employee to keep up with the latest trends.

A heatmap plotting both the variables are plotted to better understand the distribution of values.



The heatmap plotted above shows that irrespective of the job role most participants felt 2-3 difficulty level (1 being the most challenging and 5 being the least challenging) to keep up with the latest trends taking over the market. Additionally, 2 software developers felt that it was least challenging to keep up with the latest trends but the proportion is relatively low compared to participants who felt that it was a little challenging.

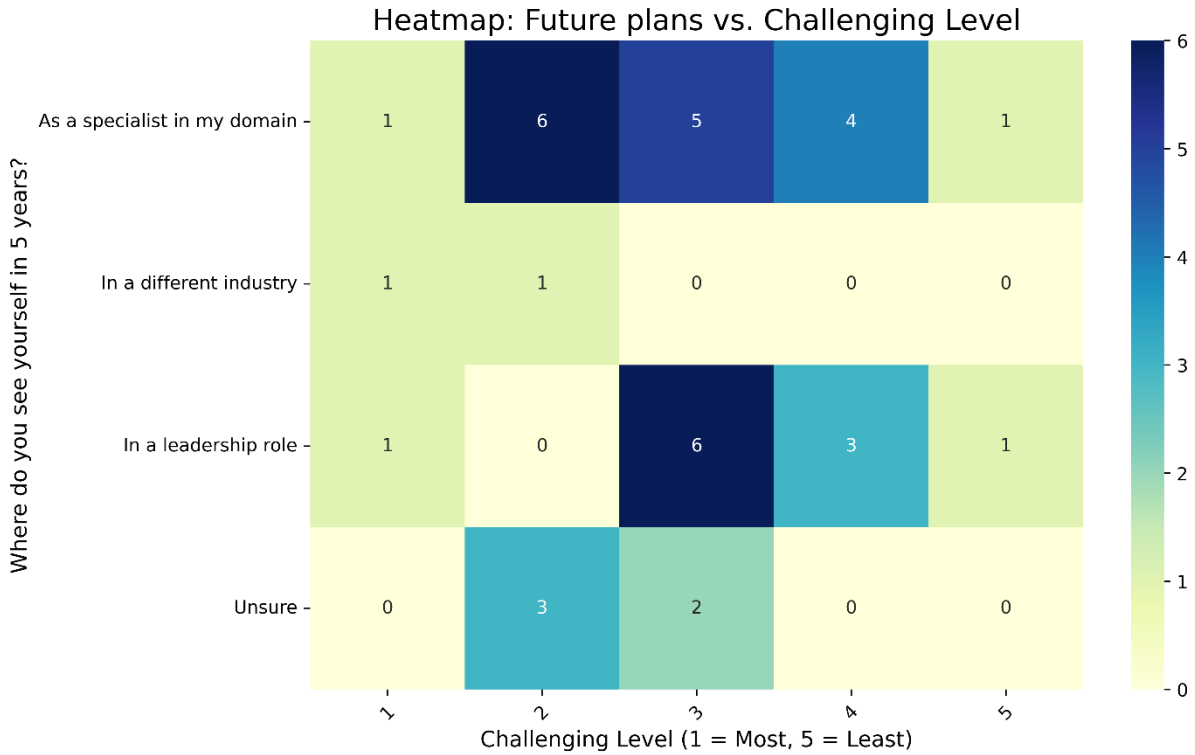
6: <u>Findings about relation between challenge level to keep up with upcoming trends and future plan of the employee after 5 years:</u>

This hypothesis test is studied on the variables namely ‘On a scale of 1 to 5, how challenging is it to keep up with the rapidly changing technology landscape with 1 being the most challenging and 5 being the least challenging?’ and ‘Where do you see yourself in the next 5

years in the IT industry?'. The test was conducted using kruska-wallis test since one of the variables are ordinal.

The p-value (0.07) which is greater than alpha (0.05) suggests that the null hypothesis can be accepted. Hence there is no relation between the level of challenge faced by employees to keep up with the latest trends and their future visions for their IT career.

A heatmap is plotted between 2 variables to better understand the distribution of values.



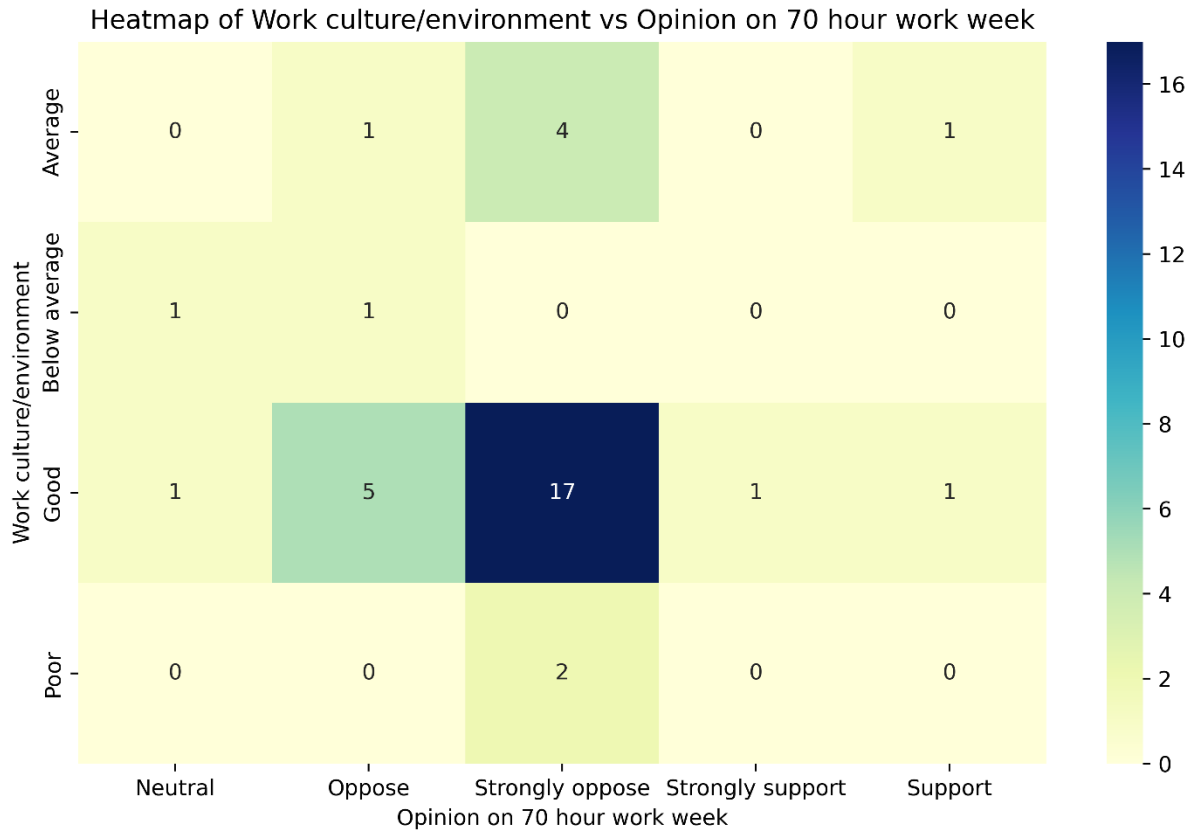
The heatmap that the difficulty level that employees face to keep up with the latest trends are not a hindrance to the aspirations they have regarding their IT career. The plot shows that the challenge level is not the deciding factor for their goals and that there might be other factors influencing their future plans. We can see a wide variety and distribution of data among the same challenge level.

7: <u>Relation between work culture and employees opinion on the proposed 70 hour work week proposed by Narayan Sathyamurthy:</u>

This hypothesis test was conducted on the variables namely 'How would you rate the work culture in your current company?' and 'What is your opinion on the proposed 70-hour workweek by Narayan Sathyamurthy?'. A Kruskal-wallis test was conducted since the variables were ordinal in nature.

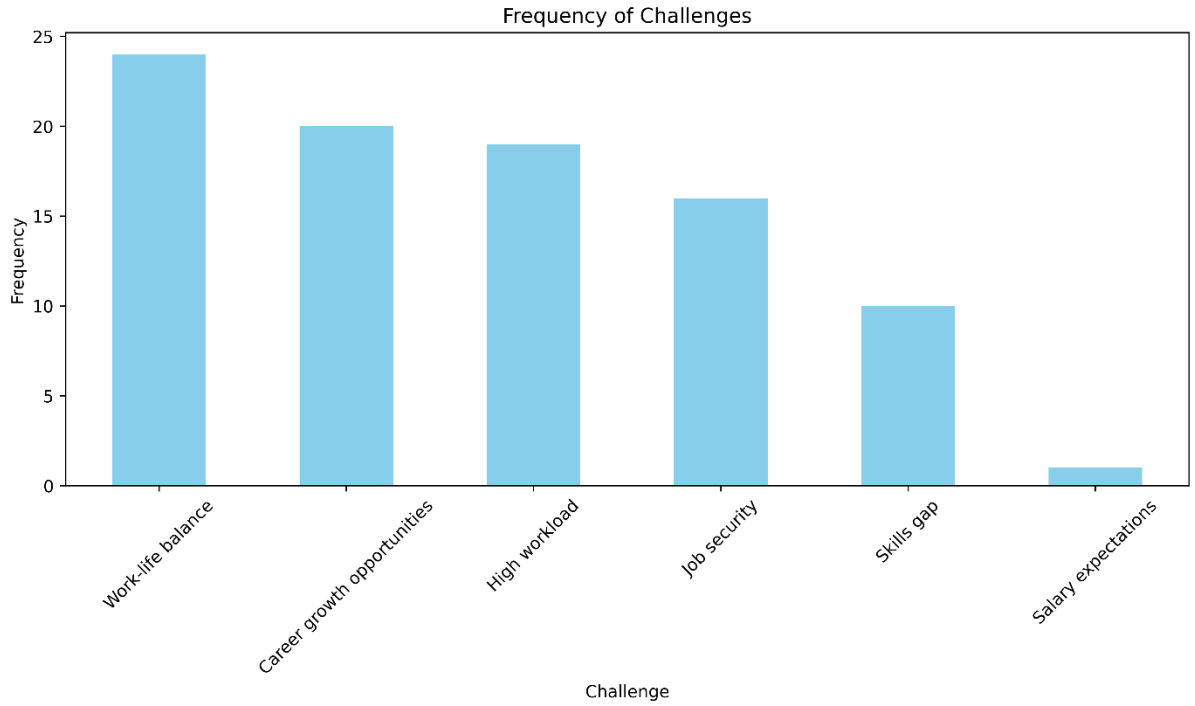
A p-value of 0.40 which is greater than alpha (0.05) indicates that the null hypothesis is accepted. Hence there is no relation between the work culture and the opinion of an employee on the 70 hour work week.

A heatmap for these 2 variables were plotted to better understand the distribution of data



The heatmap plotted above shows that the most participants opposed the idea of a 70 hour work week despite having a good work culture with only 2 participants supporting the 70 hour workweek idea. But there are some surprising revelations indicating that some participants who had an average or below average work culture supported or had a neutral opinion on the 70 hour work week proposed by Narayan Sathyamurthy. But majority of the responses revealed that irrespective of the work culture majority of the participants were not in favour of the 70 hour work week culture.

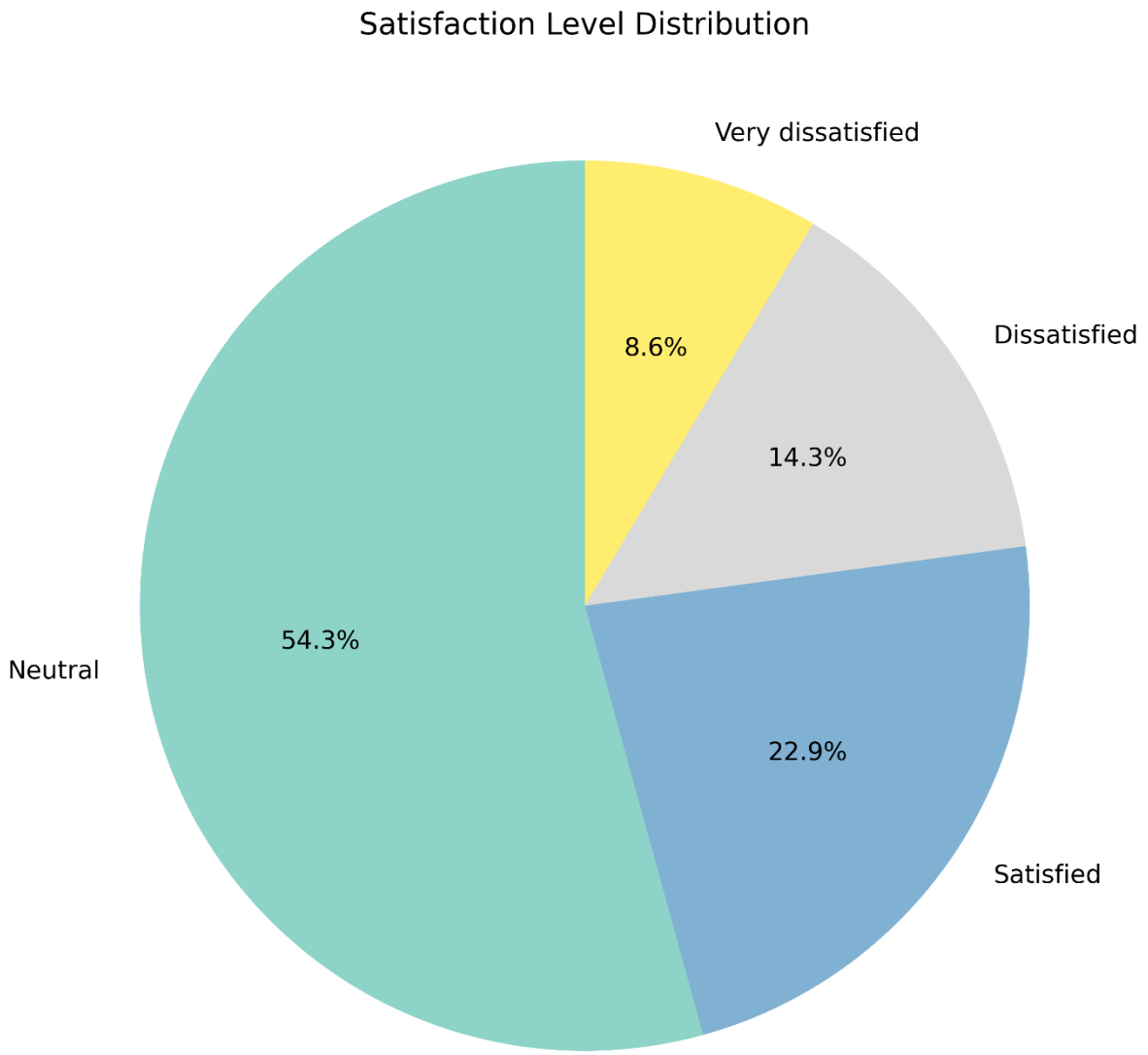
Findings on univariate analysis about the frequency of different challenges faced at the current role obtained from different responses are also provided:



The following bar graph gives us the frequency of challenges faced by employees in their job role. The bar graph follows a pattern of descending to ascending thereby showcasing that work-life balance stands as the biggest challenge followed by career growth opportunities. The following bar graph showcases that employees working in today's IT industry are more concerned with their mental and physical well being. Employees are also concerned about their career growth opportunities and they want to develop their skills and be sharp enough to be efficient employees and contribute to the overall growth in the IT industry.

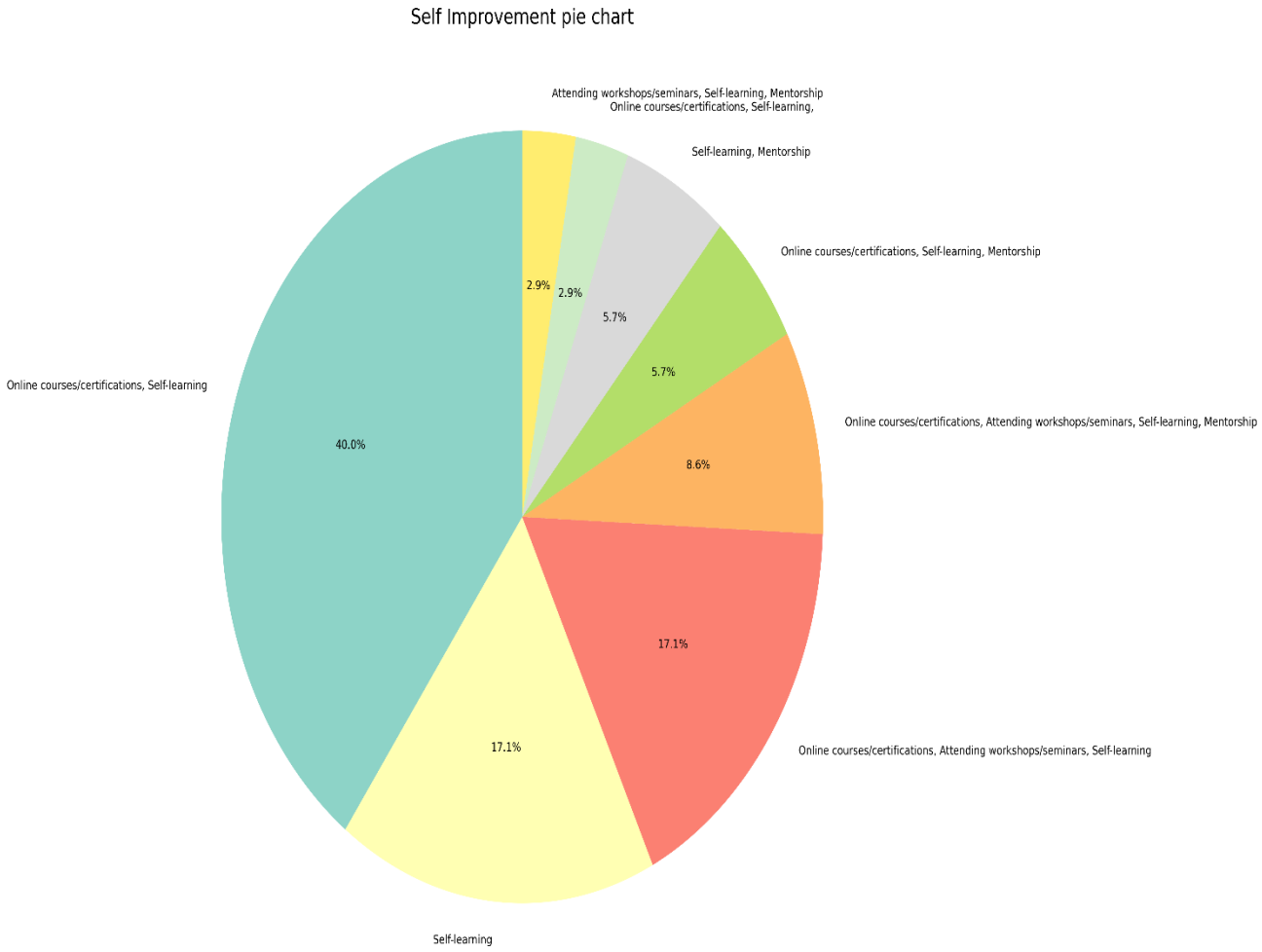
The bar graph summarizes that even in the midst of rising financial challenges, the young workforce are keen on improving the quality of the skillset rather than just focus on monetary benefits.

Findings on univariate analysis about the satisfaction levels about the current job market in Mumbai among the employees are also provided:



The above pie chart shows the perspective of employees of the current job market in Mumbai. Most of the employees have a neutral opinion while the number of dissatisfied and very dissatisfied people are quite low. The dissatisfaction might also attribute to employees exploring new job opportunities and failing to do so because of one or more factors.

<u>Findings on univariate analysis about the major techniques and methods used by employees to keep upgrading their skills in order to survive in the IT industry :</u>



The above pie chart reveals the most commonly used methods by employees to stay relevant in the IT industry. Self learning and online courses/certifications form a major chunk through which IT employees explore , learn and stay updated with the latest trends happening in the industry. Even though other options form a small chunk of the pie chart , methods like online courses and self learning overlap with other values hence making both these methods an indispensable part of the whole learning process.

The above pie chart also focuses on how the population is keen to learn more about new technologies thereby contributing to a better, quality workforce for the IT industry.

CHAPTER 11: RECOMMENDATIONS

This chapter presents recommendations based on the findings of the study on IT employees' perspective on work culture and future of the IT industry based in Mumbai. The proposed actions aim to address all the challenges identified which would help decision makers formulate better action plans for the enhancement of the IT industry.

1: For leaders :

i: Foster a work environment promoting safe working conditons

- From the study it was found that 32 out of 35 participants felt that it has become more difficult to find jobs in the current market scenario.

Leaders should make sure that they foster an environment which induces job security and clarity among the IT employees. With the absence of such an healthy environment, employees will always be on high alert and will be always on edge.

What steps can leaders take to ensure all these things take place:

- Create cordial and healthy relations with employees and interact with them on a daily basis. Create a management and HR system efficient enough to feel employees feel at ease, provide them with all the support during times of crises thereby instilling confidence in the employee.

ii: Help employees combat their future fears:

- 33 participants from 35 either agree or are neutral about the opinion that AI is impacting their job role in the longer run.
- Only around 9 participants from 35 felt that it was less challenging to keep up with latest trends.

Leaders should make sure that employees get an opportunity to learn about the latest trends making the workplace a place for the employees to not only give their best performance but also to learn about new things and feel confident about trying new things.

What steps can leaders take to ensure these things take place:

- Leaders themselves should conduct workshops encouraging healthy discussion about various topics pertaining to the IT sector. Interactive sessions and workshops should be conducted to help employees equip themselves to combat this constantly changing tech world.
- Leaders should place responsible mentors and managers known for their skilled human interaction to specifically look after a set of employees and interact with them. This would help the employees to open up about the challenges they are facing to keep up with the changes happening in the IT world and then work around those challenges so that the employees don't feel isolated or left out in battling out their professional and career growth problems.

iii: Helping employees reach their aspirations and goals:

- Most of the participants saw themselves as a specialist in their domain or as a leader in the next 5 years irrespective of the challenges they face in their current job role.

  Leaders should also take efforts to nurture the employees according to their aspirations thereby creating an overall efficient workforce.

  What steps can leaders take to ensure these things take place:

  - Identify the goals and professional aspirations of employees and train them accordingly. Create a career graph plan for each employee according to their aspirations and help them achieve it.

iv: Helping employees achieve a balanced lifestyle:

- Work-life balance, career growth opportunities, high workload and job security were among the major concerns haunting fresher – mid IT professionals.

  Steps required to induce a good work-life balance , job security and good career opportunities for employees to succeed in their life.

  What steps can leaders take to ensure these things take place:

- Make sure that employees are not overburdened and left to face a state of mental burnout at workplace. This can be achieved by managing the workload according to the strength of the employees and by creating a strong sense of transparency about the projects undertaken by the company. A strong managerial system with leaders not setting up unrealistic goals would help the employees be in a better mental space and contribute better to the development of the company.

2: For education policy makers

i: Create education policies and education syllabus according to the current trends and corporate culture:

- 50% of participants who were data analysts felt that the education provided as poor while only 25% felt that the education was well enough
- 50% of participants who were software engineers felt that the education provided was either poor or very poor with only 20% feeling that the education provided was well enough

- Among others, 60% participants felt neutral about the education system while 40% participants felt that the education was well enough.
- 50% of IT consultants felt neutral about the education system while 33.3% affirmed it was poor with only 16.7% opining that the education was well enough

No participants agreed to the fact that the education was very well or did extremely well to equip themselves for the outside world of neve ending world of IT

What can be done to improve this:

- Formulate policies that actually focus more on learning and less on burdensome assignments and pointer scoring procedures.
- Update the syllabus frequently since IT is an evolving industry with new technologies and languages popping up and taking over the market by storm. Identify technologies that are frequently used in corporate setups around the world and include them in the curriculum.
- Include solid IT professionals having a wide experience and expertise on a variety of fields while creating or updating the curriculum. This would help the education policy makers view the IT industry from a different perspective and how to make students benefit the most out of it.
- Include practical assignments and projects to help the students explore the IT world. This would help the students deal with a lot of obstacles early on making it a life changing experience for them when they step into a professional setup resulting in a better, prepared and efficient workforce.
- Arrange seminars to help students gain a clarity about what they will explore in the IT industry even before starting with the formalities of teaching them the subjects. Students will be mentally prepared as a result thereby reducing mental chaos and confusion while pursuing the course.

3: For employees:

I: Be willing to learn and explore more options

- 5 participants were unsure about their future in the industry from a total of 35 participants.

Employees should self reflect on themselves and do the following things to be more clarified about their professional life

What are the things to be done:

- Never stop learning. The constant process of learning and implementing new technologies will help an employee streamline their interest into a particular stream of tech stack thereby helping the employee to be in a clear state of mind regarding their future professional life.
- Employees should self enrol themselves and keep themselves updated with the latest trends. This would help employees to actually be aware about all the technological advancements that happen around the world and plan out their future accordingly.
- Exploring more options and learning more technologies and concepts is the only way for employees to tackle unsurety regarding their professional life.

4: For policymakers who work with the law for formulating employee friendly policies:

i: Formulation of policies:

- Majority of the participants pointed out factors like work-life balance, career growth opportunities and work load as the major challenges faced by employees in their professional life.

  Policymakers have to keep employee welfare into consideration while formulating policies by making sure that it helps in extracting the best out of employees and at the same time bring about a work life balance in their lives

  What needs to be done :

- Implement strict laws for fixed working hours for IT employees. Policy makers should implement strict laws against exploitation of employees and adopt western practices in order to make sure that our youth live their lives with utmost mental peace and good physical health.
- Implementation of policies discouraging late working hours and over time thereby decreasing the number of people risking their own life by working overtime.
- Encouraging the employees for regular health checkups keep a track of their health and adopting strict practices to help companies keep a record of all their medical history and checkups.

5: For students who aspire to build a career in IT:

I: Preparing themselves before deep diving into the IT world

- The above research study should serve as a guide for young budding students keen in IT , about how to prepare themselves.

What can be done:

- Utilize your internet and the resources around you to learn more about the world of IT.
- Create a liking or an interest towards a particular stream as you explore IT. By doing this early on , students will have to face less chaos and confusion as they move forward in their professional life.
- Create social media accounts on platforms like Linkedin. Creating connections through linkedin and interacting with connections would help students better understand the world from people who have been thriving in the industry for long.
- By doing the right things early on in their career, students will be able to widen their horizon and gain exposure to a lot of things during the early stages of their career. This way students can learn more about the world which is seldom taught by the education system of the country.

The following recommendations are not only applicable to stakeholders but also to students who wish to take up IT in their professional life. The recommendations provided consists actions to be taken on a personal level as well as on an industrial level by various stakeholders who are concerned with the research study.

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