

<https://doi.org/10.31108/2.2024.3.33.14>
УДК 005.322:004

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THE BIG FIVE PERSONALITY TRAITS AND THEIR VARIATIONS ACROSS IT JOB POSITIONS

Chayka, Rostyslav. *The Big Five Personality Traits and Their Variations Across IT Job Positions.*

Introduction. This study explores the variations in the Big Five personality traits – Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism – across different job positions in the IT industry.

Aim. To investigate how the Big Five personality traits differ across various job roles within the IT sector.

Method. 155 IT professionals from management, software development, data science, human resources, and other roles participated in this study. The Big Five traits were assessed using the BFI-2-XS questionnaire, and Multivariate Analysis of Variance (MANOVA) was employed to analyze the data.

Results. Significant differences in personality profiles were observed across job roles. Data Scientists exhibited the highest levels of Openness, while Management and HR professionals scored higher on Conscientiousness and Extraversion. No significant differences were found in Agreeableness and Neuroticism across the job positions.

Conclusion. The findings provide valuable insights into how personality traits align with specific job demands in the IT industry, offering practical implications for recruitment, team composition, and career development strategies.

Key words: personality traits, big five personality traits, IT job roles, personality profiling, vocational characteristics, MANOVA.

Чайка Ростислав. Особистісні риси «Велика п'ятірка» та їхні варіації стосовно спеціальностей в ІТ-індустрії.

Вступ. У представленому дослідженні проаналізовано варіації рис особистості Великої п'ятірки – відкритість, сумлінність, екстраверсія, приємність і невротизм – у різних спеціалістів в ІТ-індустрії.

Мета дослідження полягала в дослідженні того, чим особистісні риси Великої п'ятірки відрізняються між різними посадами в ІТ-секторі.

Метод. У дослідженні взяли участь 155 ІТ-фахівців зі сфери управління, розробки програмного забезпечення, науки про дані, управління персоналом та інших посад. Ознаки великої п'ятірки оцінювали за допомогою опитувальника BFI-2-XS, а для аналізу даних використовували багатоваріативний дисперсійний аналіз (MANOVA).

Результати. Значні відмінності в особистісних профілях спостерігалися у різних спеціальностях. Фахівці з обробки даних продемонстрували найвищий рівень відкритості, тоді як спеціалісти з менеджменту та управління персоналом отримали вищі бали за сумлінністю та екстраверсією. Не було виявлено жодних істотних відмінностей у приязності та невротизмі у представників різних спеціальностей.

Висновки. Отримані результати дають цінну інформацію про те, як особистісні риси узгоджуються з конкретними вимогами роботи в ІТ-індустрії, які можуть бути використані для підбору персоналу, створення команди та розробки стратегій розвитку кар'єри.

Ключові слова: особистісні риси, особистісні риси «Велика п'ятірка», ІТ робочі ролі, особистісний профіль, професійні характеристики, Багатоваріативний Дисперсійний Аналіз MANOVA.

Introduction.

The Big Five personality traits – Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism – provide a comprehensive framework for understanding individual differences in behavior, motivation, and interpersonal interactions. These traits are beneficial for analyzing how personality influences job performance, job satisfaction, and career success across various industries, including the fast-paced and evolving field of information technology (IT) (Costa & McCrae, 1992; Barrick & Mount, 1991). The IT industry, characterized by rapid innovation and a diverse range of roles, offers a unique context for exploring how these personality traits vary across different job positions and how they can impact employee effectiveness and organizational success (Lounsbury et al., 2014).

The Big Five model has been widely validated and applied in occupational psychology, with research consistently demonstrating its relevance to workplace outcomes. Higher levels of Conscientiousness, for example, are associated with enhanced job performance and organizational commitment, while Extraversion is frequently linked to leadership success and team-oriented roles (Barrick & Mount, 1991; Judge et al., 2002). Openness has been found to predict adaptability and creativity, which are increasingly important in technical and analytical roles within IT, where innovation is key (Lounsbury et al., 2014; McCrae & Costa, 1997). In contrast, Neuroticism often negatively correlates with job performance, as individuals with high neurotic tendencies may struggle to cope with high-pressure work environments, a common challenge in IT sectors (Judge et al., 2002).

Several theoretical models explain why different job roles attract individuals with particular personality traits. Holland's vocational choice theory (1966, 1985) suggests that individuals are drawn to careers that align with their personalities, resulting in a match between personal characteristics and job demands. Similarly, Schneider's Attraction-Selection-Attrition (ASA) model (1987) posits that organizations tend to attract, select, and retain individuals whose personality traits fit the specific role requirements well. Over time, this process leads to homogeneity within roles, where certain traits become more common among individuals in similar positions (Satterwhite et al., 2009).

In the IT industry, different roles require distinct skill sets and interpersonal abilities (Barrick et al., 2003). For instance, management and team leadership roles benefit from individuals high in Extraversion and Agreeableness, as these traits are crucial for collaboration, communication, and motivating others. On the other hand, technical roles such as software development and data science often demand high levels of Openness and Conscientiousness, traits that support creativity, problem-solving, and attention to detail (Barrick & Mount, 1991; Lounsbury et al., 2014). Understanding these variations in personality across roles can provide organizations with better strategies for recruiting, team-building, and assigning tasks based on individual strengths.

Despite the well-established link between personality traits and job performance, there is still a limited understanding of how the Big Five personality traits manifest across specific IT job roles. Most research has focused on general job performance without delving deeply into how particular traits align with the specific requirements of different IT roles. This gap in the literature presents a significant opportunity to explore how personality traits influence role fit and success in the IT industry. Addressing this gap can lead to a better understanding of aligning personality traits with job demands, ultimately enhancing individual performance and team effectiveness.

By examining variations in the Big Five personality traits across a range of IT roles, we aim to provide organizations with practical insights into how they can optimize recruitment, tailor employee development programs, and create more effective teams by aligning personality traits with job roles. This research also contributes to the broader field of organizational psychology, offering a nuanced understanding of how personality traits shape career outcomes and organizational performance in a rapidly evolving industry.

The findings from this study will not only fill a critical gap in the literature but also provide actionable recommendations for IT companies. Organizations can improve job role assignments,

enhance team dynamics, and foster an environment that leverages employees' natural strengths by understanding the personality profiles best suited to different roles. This approach can lead to higher job satisfaction, better performance, and improved organizational outcomes in the highly competitive IT sector.

Research aim.

The primary goal of this research is to investigate the differences in the Big Five personality traits – Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism – across various job roles within the IT industry. By examining how these traits manifest in different positions, such as management, software development, quality assurance, and others, the study aims to provide insights into how personality profiles align with job demands.

Research tasks:

1. Assess the overall distribution of the Big Five personality traits within the IT industry across different job roles.

2. Perform statistical analyses, including Multivariate Analysis of Variance (MANOVA), to identify significant differences in Big Five personality traits between job roles such as management, software development, quality assurance, and others.

3. Investigate which specific Big Five traits (e.g., Conscientiousness, Extraversion) are most distinct between job positions and how these differences align with the expected demands of the roles.

4. Based on the findings, offer recommendations on how organizations can utilize personality assessments to improve hiring, team formation, and job role assignments in the IT industry.

Methods and research design.

Procedure.

The study was part of a larger research project conducted between October 2023 and January 2024. A total of 155 IT professionals participated, representing various roles and levels of experience within the IT industry. Recruitment was carried out through email invitations and active engagement in IT-related and project management Telegram channels.

Data were collected via an online survey platform, which provided participants with easy access and ensured full confidentiality of responses. All participants voluntarily provided informed consent before completing the survey. To encourage participation, respondents who completed the survey were offered free attendance at one of three online events or a training session to improve career decision-making skills.

Sample.

The sample consisted of 155 IT professionals with a mean age of 35. Of the respondents, 44.5% were male. Regarding marital status, 58.1% of the participants were married, 16.1% were in civil partnerships, 7.1% were divorced, and 14.2% were single. 87.1% had higher education degrees, 8.4% held a PhD, and 4.5% had incomplete higher or secondary education. The participants had an average of 9.72 years of work experience in the IT field.

Most respondents worked in service- or product-based IT companies (49.7%) (37.4%). Regarding employment status, 88.4% were full-time employees, 5.2% worked part-time, and 2.6% were freelancers.

Measures.

Big Five Personality Traits. To assess the personality traits of participants, the study utilized the Ukrainian version of the 15-item Big Five Inventory-2 (BFI-2-XS) (Soto & John, 2017), adapted and translated by Klimanska and Haletska (2019). This inventory measures five broad dimensions of personality, with three specific sub-facets within each dimension. Participants rated their agreement with statements that completed the phrase "I am someone who..." using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). For example, one of the items was phrased as "I often feel tense."

The five personality dimensions assessed were:

- Neuroticism is indicated by tendencies toward moodiness and emotional variability (e.g., "I often feel tense").
- Extraversion is highlighted by sociability and an outgoing nature.
- Openness characterized by curiosity about various subjects and new experiences.
- Agreeableness, reflecting compassion, kindness, and cooperation.
- Conscientiousness exemplified by reliability, responsibility, and consistency.

Where necessary, items were reverse-scored, and the average score for each trait was calculated. Higher averages indicated a stronger presence of the respective trait.

The reliability of the scales varied, with Cronbach's alpha values ranging from 0.60 for traits like intellectual curiosity to 0.89 for neuroticism. Other sub-facets, such as assertiveness and depression-related items, had lower reliability, ranging from 0.44 to 0.72, demonstrating the inventory's utility in capturing diverse aspects of personality across a wide range of traits.

Results and discussion.

Descriptive Statistics for Big Five Personality Traits Across Job Positions.

Table 1 presents the frequency analysis of the different job positions represented in the sample. The sample consists of 155 IT professionals from various roles within the industry. Management positions comprise the most significant portion of the sample, making up 42.6%, followed by Software Developers, representing 26.5%. Other roles, such as Analysts, Quality Assurance, and Marketing, are also defined but in smaller proportions. Notably, Data Scientists and individuals in Sales and Other roles constitute a smaller sample share, ranging between 1.3% and 1.9%. The table illustrates the distribution of participants across these key IT job roles, providing a foundation for the subsequent analyses of personality traits by position.

Table 1

Frequency analysis of positions in the sample

	Frequency	Share
Analyst	15	9.6%
Data Scientist (DS)	2	1.3%
Human Resources (HR)	4	2.6%
Management	66	42.6%
Marketing	6	3.9%
Other	3	1.9%
Quality Assurance (QA)	10	6.5%
Sales	3	1.9%
Scrum Master	4	2.6%
Software Developer	41	26.5%

Table 2 and Table 3 present the descriptive statistics, including the mean and standard deviation (SD), for the Big Five personality traits across the various job positions in the IT industry. These job positions include Analyst, Data Scientist (DS), Human Resources (HR), Management, Marketing, Other, Quality Assurance (QA), Sales, Scrum Master, and Software Developer. The results show distinct patterns of personality traits across different roles,

highlighting key differences in how traits such as Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism are distributed among these positions.

Table 2

Mean values of Big Five personality traits across different IT roles

Position	Mean - O	Mean - N	Mean - C	Mean - A	Mean - E
Analyst	3.84	3.00	4.00	3.38	3.53
Data Scientist (DS)	4.83	2.33	3.17	3.50	3.00
Human Resources (HR)	3.67	2.50	4.33	4.08	4.00
Management	3.71	2.82	4.13	3.36	3.49
Marketing	4.44	3.06	3.11	3.72	3.39
Other	3.78	3.22	4.11	3.33	3.11
Quality Assurance (QA)	3.55	2.97	3.79	3.36	2.97
Sales	4.00	3.00	4.22	3.89	3.56
Scrum Master	3.33	2.83	4.33	3.75	3.75
Software Developer	3.60	2.93	3.59	3.33	2.90

Notations:

Mean - O: Mean Openness

Mean - N: Mean Neuroticism

Mean - C: Mean Conscientiousness

Mean - A: Mean Agreeableness

Mean - E: Mean Extraversion

Openness to Experience: Data Scientists exhibited the highest mean score for Openness (Mean = 4.83, SD = 0.24), indicating that individuals in this role are more likely to be curious and open to new experiences. In contrast, Scrum Masters had the lowest mean Openness (Mean = 3.33, SD = 0.82), suggesting less inclination toward creativity and exploration.

Neuroticism: Human Resources professionals and Data Scientists showed the lowest levels of Neuroticism (Mean = 2.50 and 2.33, respectively), while professionals in the "Other" category had the highest levels (Mean = 3.22, SD = 1.26). These results suggest that Data Scientists and HR professionals tend to experience less emotional instability and stress.

Conscientiousness: HR professionals and Scrum Masters demonstrated the highest levels of Conscientiousness (Mean = 4.33 for both), indicating that these roles require a high degree of organization and dependability. Marketing professionals, however, exhibited the lowest levels of Conscientiousness (Mean = 3.11, SD = 0.81), which may reflect the more flexible and creative nature of marketing tasks.

Table 3

Standard Deviation of Big Five personality traits across different IT roles

Position	STD - O	STD - N	STD - C	STD - A	STD - E
Analyst	0.73	1.01	0.52	0.43	0.84
Data Scientist (DS)	0.24	1.41	1.65	1.18	0.94
Human Resources (HR)	0.82	0.58	0.27	0.83	0.54
Management	0.63	0.96	0.70	0.65	0.76
Marketing	0.46	1.04	0.81	0.90	0.44
Other	0.69	1.26	0.51	0.58	0.69
Quality Assurance (QA)	0.64	1.04	0.64	0.67	0.50
Sales	0.67	1.15	0.19	1.17	0.19
Scrum Master	0.82	0.79	0.47	0.42	0.57
Software Developer	0.54	0.98	0.72	0.77	0.72

Notations:

STD - O: Standard Deviation Openness

STD - N: Standard Deviation Neuroticism

STD - C: Standard Deviation Conscientiousness

STD - A: Standard Deviation Agreeableness

STD - E: Standard Deviation Extraversion

Agreeableness: Human Resources professionals had the highest levels of Agreeableness (Mean = 4.08, SD = 0.83), emphasizing the need for compassion and cooperation in HR roles. Conversely, Software Developers and QA professionals showed lower levels of Agreeableness (Mean = 3.33 and 3.36, respectively).

Extraversion: The highest mean Extraversion was observed among HR professionals (Mean = 4.00, SD = 0.54), reflecting the interpersonal and communication demands of this role. On the other hand, Software Developers had the lowest Extraversion score (Mean = 2.90, SD = 0.72), which aligns with the more solitary and task-focused nature of their work.

The descriptive statistics indicate that personality traits vary considerably across different job positions in the IT industry. For instance, roles that involve significant interaction with others, such as HR and Sales, tend to score higher on traits like Agreeableness and Extraversion. In contrast, technical roles, such as Software Developer and Data Scientist, tend to score higher on Openness and lower on Extraversion and Agreeableness. These findings provide an initial understanding of how personality traits align with the demands of different IT roles, setting the stage for further analysis in the subsequent sections.

Multivariate Analysis of Variance (MANOVA) Results.

To examine whether the Big Five personality traits significantly differ across IT job positions, a Multivariate Analysis of Variance (MANOVA) was conducted. The Big Five personality traits—Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism—were treated as the dependent variables, and job position (e.g., Management, Software Developer, QA, Analyst, etc.) was the independent variable.

The MANOVA results indicated a significant multivariate effect of job position on the Big Five personality traits, as shown by the following test statistics:

- Wilks' Lambda: $\Lambda = 0.57623$, $F(45, 633.83) = 1.85$, $p = 0.00086$

- Pillai's Trace: $V = 0.49333$, $F(45, 725) = 1.76$, $p = 0.00185$
- Hotelling-Lawley Trace: $T = 0.62074$, $F(45, 697) = 1.92$, $p = 0.00037$
- Roy's Largest Root: $R = 0.36378$, $F(9, 145) = 5.86$, $p = 5.92e-07$

These results indicate that job position had a statistically significant effect on the combination of the Big Five personality traits, as evidenced by the significant results from Wilks' Lambda and the other multivariate test statistics (Pillai's Trace, Hotelling-Lawley, and Roy's Largest Root). The overall multivariate significance suggests that there are meaningful differences in the personality profiles of individuals working in different IT roles.

Post-hoc Univariate ANOVAs for Each Trait. Following the significant MANOVA result, univariate ANOVAs were conducted to examine the effects of job position on each of the Big Five traits individually.

Openness: The analysis revealed a significant difference in Openness across job positions ($F(9, 145) = 2.19$, $p = 0.0259$). Post-hoc comparisons did not indicate any specific job pairs with significant differences, but Data Scientists had the highest mean score for Openness, while Scrum Masters had the lowest.

Conscientiousness: A highly significant effect of job position was found on Conscientiousness ($F(9, 145) = 3.38$, $p < 0.001$). Post-hoc analysis using Bonferroni correction showed that:

- Management roles scored significantly higher on Conscientiousness than Software Developers ($p = 0.0063$).
- Management also scored significantly higher than Marketing professionals ($p = 0.0303$).

Extraversion: The effect of job position on Extraversion was also significant ($F(9, 145) = 3.00$, $p = 0.0026$). Post-hoc tests revealed that:

- Management roles had significantly higher Extraversion than Software Developers ($p = 0.0033$).

Agreeableness: The analysis for Agreeableness did not show a statistically significant difference across job positions ($F(9, 145) = 0.93$, $p = 0.5009$), indicating that this trait did not vary significantly by job role in this sample.

Neuroticism: Similarly, the results for Neuroticism showed no significant effect of job position ($F(9, 145) = 0.28$, $p = 0.9801$), suggesting that emotional variability and moodiness did not differ substantially across IT roles.

Summary of Significant Differences.

Conscientiousness: This trait exhibited the most pronounced differences across job positions, particularly between Management and Software Developers and Marketing professionals. This indicates that individuals in management roles are generally more conscientious, reliable, and organized than those in technical or creative positions.

Extraversion: Extraversion varied significantly between job positions, with Management roles demonstrating higher levels of sociability and assertiveness compared to Software Developers, who tend to be more introverted.

Openness: Although significant overall, post-hoc analyses did not reveal specific job positions with significant pairwise differences. However, Data Scientists consistently scored higher on Openness, reflecting the innovative and explorative nature of this role.

Agreeableness and Neuroticism: No significant differences were found across job positions for Agreeableness and Neuroticism, suggesting that these traits are relatively stable and consistent across IT roles.

Trait-Specific Analyses.

Openness. The analysis revealed a significant difference in Openness across job positions ($F(9, 145) = 2.19$, $p = 0.0259$). Although post-hoc comparisons did not identify specific job pairs with significant differences, notable trends emerged. Data Scientists exhibited the highest levels of Openness (Mean = 4.83, SD = 0.24), reflecting their need for curiosity, innovation, and adaptability in handling complex problems. Conversely, Scrum Masters displayed the lowest levels of Openness (Mean = 3.33, SD = 0.82), which may reflect the more structured and coordination-focused nature of their role.

Conscientiousness. Conscientiousness was one of the traits with the most pronounced differences across job positions ($F(9, 145) = 3.38, p < 0.001$). Post-hoc analysis revealed that Management roles scored significantly higher on Conscientiousness compared to both Software Developers ($p = 0.0063$) and Marketing professionals ($p = 0.0303$). This aligns with the role of managers in organizing and overseeing tasks, which requires high levels of responsibility, attention to detail, and reliability. HR professionals and Scrum Masters also demonstrated relatively high levels of Conscientiousness, suggesting that these roles require substantial planning and consistent effort.

Extraversion. Significant differences in Extraversion were also observed across job positions ($F(9, 145) = 3.00, p = 0.0026$). Post-hoc analysis revealed that Management roles exhibited significantly higher levels of Extraversion compared to Software Developers ($p = 0.0033$). This finding underscores the interpersonal and communicative demands placed on managers, while software developers, who often work more independently, exhibited lower levels of sociability and assertiveness.

Agreeableness. The analysis for Agreeableness did not reveal significant differences across job roles ($F(9, 145) = 0.93, p = 0.5009$). This suggests that traits related to compassion, cooperation, and interpersonal sensitivity were relatively consistent across positions, with no specific roles standing out as particularly higher or lower in Agreeableness.

Neuroticism. Similarly, Neuroticism showed no significant differences across job positions ($F(9, 145) = 0.28, p = 0.9801$). This suggests that the tendency to experience negative emotions like anxiety and mood swings did not vary substantially between IT professionals in different roles, indicating a stable emotional profile across the industry.

Summary of Key Findings.

The results from the analysis suggest significant variation in personality traits across IT job positions, particularly in Openness, Conscientiousness, and Extraversion:

- Openness was highest among Data Scientists, reflecting their need for creativity and problem-solving, while Scrum Masters exhibited the lowest levels.
- Conscientiousness was significantly higher among Management and HR professionals, suggesting that these roles demand higher levels of responsibility, organization, and reliability.
- Extraversion was more prevalent among Management roles compared to Software Developers, indicating that leadership positions often require greater sociability and assertiveness.
- No significant differences were found for Agreeableness and Neuroticism, suggesting that these traits are relatively stable across different IT roles.

These findings underscore the importance of role-specific personality profiles in the IT sector, where the nature of the work shapes the personality traits most associated with success.

Comparison with Existing Literature.

The current findings align with existing research on the Big Five personality traits and occupational roles. Conscientiousness has consistently been linked with better job performance, particularly in leadership roles where planning and reliability are critical (Barrick & Mount, 1991; Judge et al., 2002). The higher levels of Conscientiousness among Management and HR professionals observed in this study corroborate previous research, which emphasizes the need for reliability and task orientation in these roles (Lounsbury et al., 2014).

Similarly, the significant differences in Extraversion between Management and Software Developers align with previous findings. Extraversion is known to predict success in social and leadership roles (Judge et al., 2002; Barrick et al., 2002), which is consistent with the higher levels of Extraversion observed among managers in this study. The lower Extraversion scores among Software Developers reflect the more task-focused, independent nature of their work, as reported in prior studies (Barrick et al., 2003).

The results related to Openness are also in line with prior research that suggests roles requiring innovation and complex problem-solving, such as those of Data Scientists, are associated with higher levels of Openness (DeYoung, 2015). Conversely, roles that emphasize structure and coordination, such as Scrum Masters, tend to show lower levels of Openness, as found in this study.

However, the lack of significant differences in Agreeableness and Neuroticism contrasts with some previous findings that have suggested these traits may differ between more people-oriented roles and technical roles (Tett et al., 2000). This discrepancy could be attributed to the specific demands of the IT industry, where teamwork is important across roles, potentially leading to more homogeneous scores in these traits.

Practical Implications.

The findings of this study offer several practical implications for organizations within the IT industry, particularly in the areas of recruitment, team composition, and professional development.

Recruitment and Selection. Understanding the personality profiles associated with specific IT roles can help organizations improve their recruitment strategies. For example, roles that require high levels of organization and reliability, such as Management and HR, should prioritize candidates high in Conscientiousness. On the other hand, for positions like Data Scientists, where creativity and innovation are key, hiring processes should focus on identifying individuals with high levels of Openness. By aligning job requirements with personality traits, organizations can enhance job fit, leading to higher job performance and employee satisfaction.

Team Composition. The variation in personality traits across roles suggests that effective team composition should account for these differences. For instance, teams responsible for creative and innovative projects may benefit from including individuals with higher levels of Openness and Extraversion, while teams focused on process-driven tasks may require members who are more Conscientious and less Neurotic. Balancing these traits within teams can improve collaboration, innovation, and overall project outcomes.

Leadership Development. The significant differences in Extraversion and Conscientiousness between Management and technical roles underscore the importance of developing leadership qualities in those aspiring to move into management positions. Training programs that focus on enhancing communication skills, assertiveness, and organization could better prepare technical employees, such as Software Developers, to transition into leadership roles.

Career Guidance. These findings can also be applied in career development programs within organizations. By providing employees with insights into how their personality traits align with different career paths, organizations can help individuals make more informed career decisions. For example, an employee with high Conscientiousness and Extraversion may be encouraged to pursue managerial roles, while someone with high Openness may be better suited for innovative, research-oriented positions.

Limitations of the Study.

While this study provides valuable insights into the relationship between personality traits and IT job roles, several limitations should be considered when interpreting the results:

- **Sample Size and Representation:** The sample included 155 IT professionals from a limited number of roles, with smaller sample sizes for specific positions such as Data Scientists and HR. As a result, the findings may not fully generalize to all IT roles or organizations. Future studies with larger and more diverse samples are needed to confirm these results.
- **Self-Reported Data:** The use of self-reported personality assessments, such as the Big Five Inventory-2 (BFI-2-XS), may introduce bias. Participants may have over- or under-reported certain traits due to social desirability or lack of self-awareness. Future research could incorporate more objective measures of personality or gather peer or supervisor ratings to triangulate the results.
- **Cross-Sectional Design:** This study utilized a cross-sectional design, which provides a snapshot of personality traits at a single point in time. As a result, it does not capture how personality traits or job demands might change over time or how individuals might adapt their traits in response to role demands. Longitudinal studies could help explore how personality traits evolve within specific IT roles.
- **Cultural Context:** The study was conducted using a Ukrainian version of the Big Five Inventory, and all participants were IT professionals working in a specific cultural and industry

context. The findings may not generalize to IT professionals in different countries or cultural settings. Cross-cultural comparisons would be beneficial to explore the consistency of these results across various regions.

Conclusions. This study examined the variations in Big Five personality traits across different job roles within the IT industry, providing valuable insights into how specific traits align with the demands of various positions. The findings revealed significant differences in Openness, Conscientiousness, and Extraversion, while Agreeableness and Neuroticism showed relatively stable levels across roles.

Data Scientists exhibited the highest levels of Openness, reflecting their need for creativity and innovation in handling complex data and problem-solving tasks. Managers and HR professionals demonstrated higher levels of Conscientiousness and Extraversion, emphasizing the organizational and interpersonal demands of leadership and people-oriented roles. In contrast, Software Developers showed lower levels of Extraversion, consistent with the independent and task-oriented nature of their work.

These findings have practical implications for recruitment, team composition, and leadership development in IT organizations. By aligning job roles with personality traits, companies can enhance job performance, job satisfaction, and overall organizational success. Additionally, the results provide a foundation for career guidance, helping IT professionals navigate their career paths based on their personality strengths.

However, the study's limitations, such as the relatively small sample size for specific roles and the reliance on self-reported data, suggest caution when generalizing the results. Future research should explore these findings across larger and more diverse samples, incorporate longitudinal designs, and investigate additional IT roles to build a more comprehensive understanding of personality and job fit in the IT industry.

Future Research Directions.

This study opens several avenues for future research in understanding the relationship between personality traits and job roles within the IT industry:

- **Longitudinal Studies:** To better understand how personality traits evolve over time within IT job roles, future research could adopt a longitudinal design. This would allow for an exploration of how traits like Conscientiousness and Openness develop in response to changing job demands, role transitions, or professional development initiatives.
- **Cross-Cultural Comparisons:** Given the global nature of the IT industry, future studies should examine whether the patterns observed in this study hold across different cultural contexts. Cross-cultural research could explore how societal norms, work environments, and industry structures impact the relationship between personality traits and job roles.
- **Exploring Additional IT Roles:** This study focused on a limited set of IT roles, such as Management, Software Developers, QA, and Data Scientists. Future research could expand to include other specialized roles in IT, such as UX Designers, Cybersecurity Experts, or DevOps Engineers, to provide a more comprehensive understanding of personality traits across the broader IT landscape.
- **Role Transitions and Personality Adaptation:** Future research could investigate how individuals' personality traits adapt as they transition between roles, particularly as they move from technical positions to leadership roles. Understanding how traits such as Extraversion or Conscientiousness change as employees take on new responsibilities could inform leadership development programs.
- **Personality and Team Dynamics:** Another promising area for future research is the impact of personality traits on team dynamics in IT settings. Investigating how different combinations of personality traits within teams affect collaboration, innovation, and productivity would provide valuable insights for building high-performing teams.
- **Objective Performance Metrics:** Future studies could link personality traits to objective job performance metrics (e.g., project completion rates, customer satisfaction) to better understand how specific traits directly contribute to success in various IT roles. This could help refine

recruitment and professional development strategies by identifying the traits that predict job performance in different contexts.

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Отримано 30 вересня 2024 р.
Рецензовано 21 жовтня 2024 р.
Прийнято 21 жовтня 2024 р.