

INTRODUCTION TO STATISTICS WITH EXCEL

Effectiveness Evaluation Report



About Infocrita

Infocrita is a pioneering data solutions and consultancy company committed to empowering individuals and organizations through advanced data analysis, cutting-edge technology, and comprehensive research support. With expertise spanning over 400 analysis works across fields such as social sciences, management, computer science, and more, Infocrita has established itself as a trusted partner for academic, business, and training solutions. Our team is guided by subject matter experts, doctorate holders in statistics and data science, and skilled professionals dedicated to delivering insights and innovation.

Infocrita Centre for Training and Development

The Infocrita Centre for Training and Development focuses on enhancing the skills and knowledge of individuals and organizations. We specialize in delivering workshops, training sessions, and certifications in various technologies, including Python, R, Power BI, Excel, Tableau, SPSS, and machine learning. Our mission is to equip learners with practical skills that drive career advancement and organizational success. By creating a dynamic learning environment, we aim to bridge the gap between theoretical knowledge and practical application.

Upskill 2025 is Infocrita's flagship initiative designed to equip individuals and organizations with the skills needed to excel in the digital era. It promotes lifelong learning and focuses on mastering essential tools and technologies like Excel, Power BI, Python, and AI-driven solutions. Aligned with the demands of digital transformation, Upskill 2025 fosters a culture of growth, innovation, and readiness to tackle future challenges, empowering participants to stay competitive and thrive in a rapidly evolving world.

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Introduction to statistics with excel

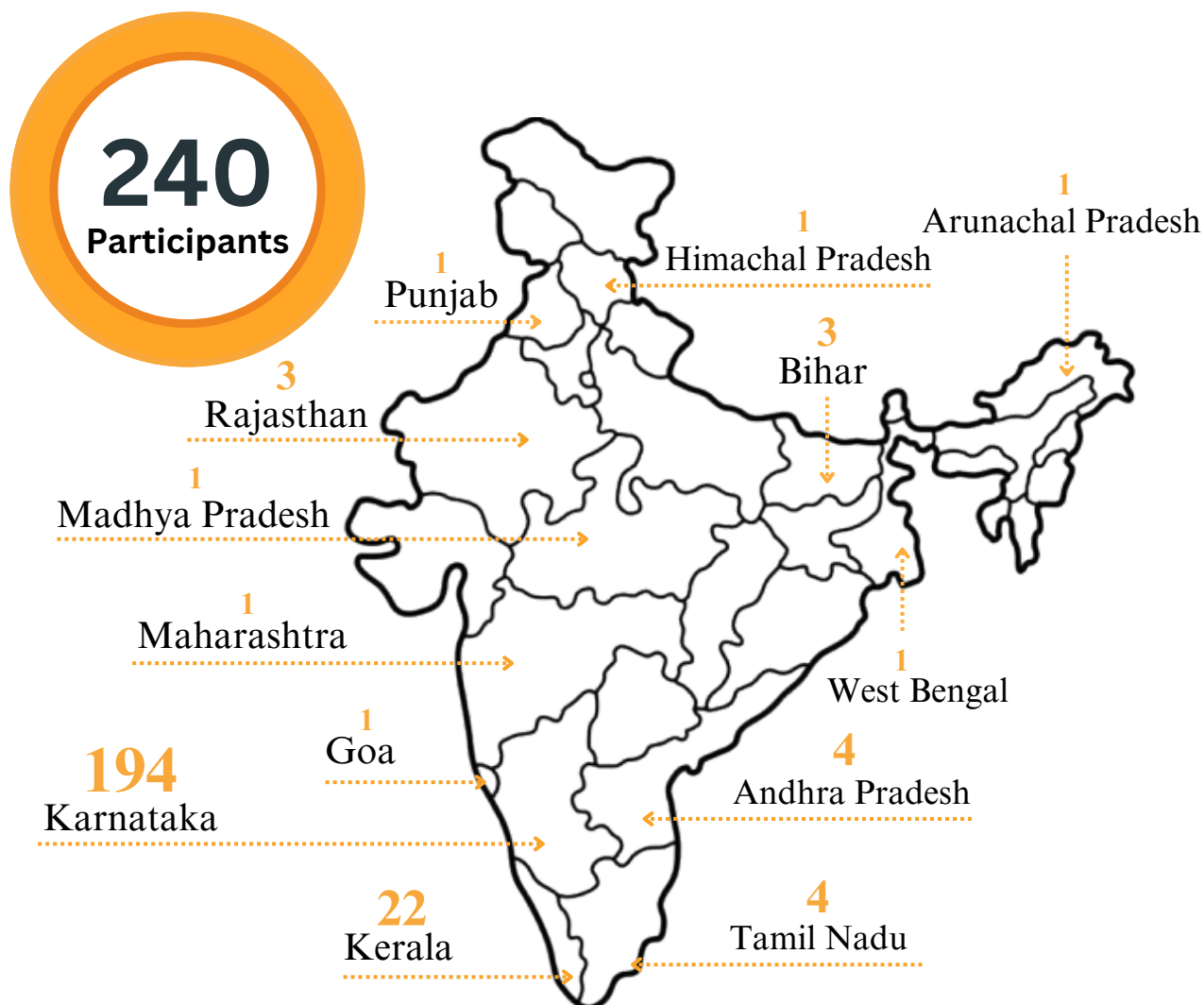
Introduction

The Excel Boot Camp: **Introduction to Statistics with Excel**, conducted by Infocrita Data Solutions, was an intensive two-day live training session designed to equip participants with essential statistical skills using Microsoft Excel. Led by **Dr. Jitto Jose, an Assistant Professor at Mar Athanasius College, Kothamangalam**, the boot camp provided in-depth training on fundamental and advanced statistical techniques, making complex concepts accessible through Excel's powerful analytical tools.

Dr. Jitto, with his vast academic expertise, guided participants through key statistical methodologies, ensuring a hands-on learning experience. This structured training was particularly beneficial for students, professionals, and researchers looking to strengthen their data analysis capabilities. The boot camp covered a broad spectrum of topics, including **fundamental statistics, descriptive and inferential statistics, hypothesis testing, and real-world applications**, ensuring a comprehensive learning journey.

The boot camp saw an enthusiastic participation of **240 individuals**, ranging from students to working professionals. To make the training accessible to a wider audience, the program was offered at an affordable fee of ₹169. Participants received a comprehensive package, including recorded sessions, certificates of completion, and follow-up support, ensuring continuous learning even after the live sessions.

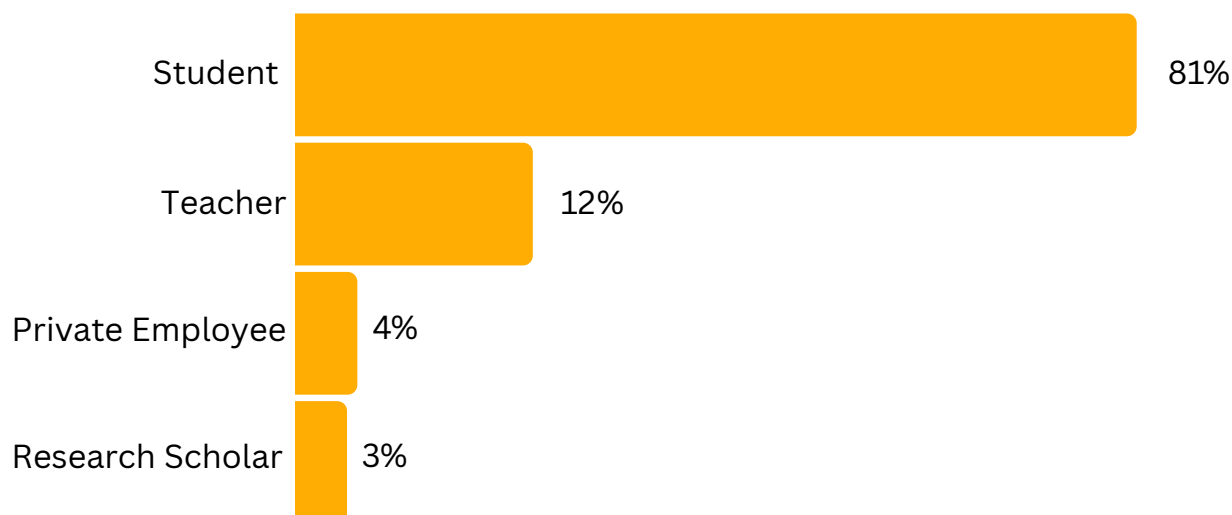
Regional Participation Analysis



Karnataka (194) has the highest participation, reflecting strong engagement in the program. Kerala (22) also shows notable interest, followed by Tamil Nadu (4), Bihar (3), and Rajasthan (3), indicating a diverse range of participants. **Andhra Pradesh** has 2 participants, contributing to the regional representation. Additionally, the program has attracted **international participation**, highlighting its wider reach beyond India.

Additionally, states like **Arunachal Pradesh, Goa, Himachal Pradesh, Madhya Pradesh, Maharashtra, Punjab, and West Bengal** each have 1 participant, demonstrating interest from various parts of the country. The data highlights significant participation from South India, particularly Karnataka and Kerala, while also showcasing engagement from multiple other states.

Participant Profile and Professional Diversity



Students Steal the Spotlight

The bar chart reveals a significant dominance of **students** with **81%** among participants, showing strong interest from the academic community.

Educators and Researchers Make Their Mark

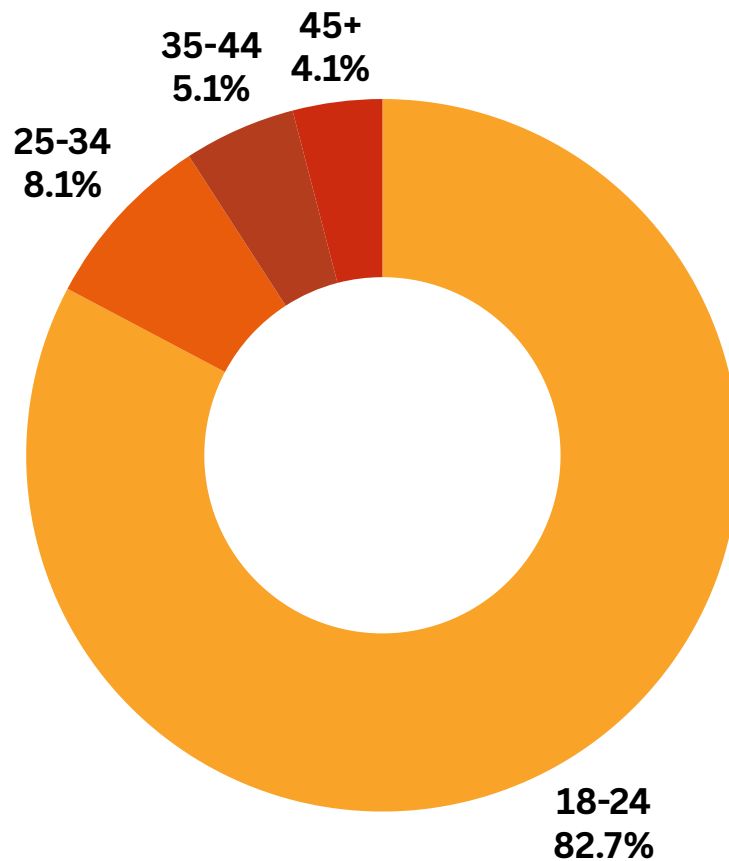
Teachers(12%) : A notable presence, contributing academic expertise.

Research Scholars(3%) : A small but significant group, possibly engaged in higher studies or specialized research.

Limited Professional Representation

Private Employees(4%) : A minor fraction, indicating limited involvement from working professionals.

Age Demographics at a Glance



Youth Take the Lead!

- 18–24 years (82.7%) : The overwhelming majority, likely students or early-career professionals.

Steady Shift in Participation

- 25–34 years (8.1%) : A smaller yet notable presence, possibly postgraduate students or young professionals.
- 35–44 years (5.1%) : Mid-career professionals and faculty representation is limited.
- 45+ years (4.1%) : The least represented group, indicating minimal senior participation.

Core Domains of Excel Bootcamp

➤ Statistical Foundations

This domain focuses on the fundamental principles of statistics, equipping participants with a strong base in statistical concepts, data types, and essential techniques. Understanding these fundamentals is crucial for any aspiring statistician or data analyst to build upon and apply advanced methods effectively.

➤ Data Exploration & Decision Making

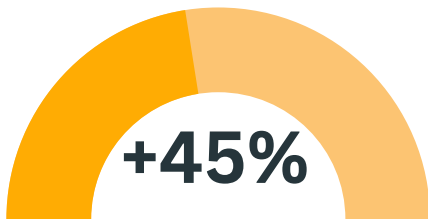
This domain integrates descriptive and inferential statistics, emphasizing the importance of summarizing data, identifying patterns, and drawing meaningful conclusions. It covers topics such as data visualization, measures of central tendency and dispersion, probability distributions, hypothesis testing, and confidence intervals—equipping participants with the skills to analyze and interpret data-driven insights.

➤ Statistical Analysis & Real-World Applications

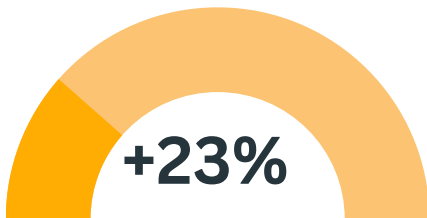
This domain bridges statistical theory with practical implementation. It includes topics like statistical hypothesis testing, regression analysis, and real-world case studies where statistical methods are applied. Participants will gain hands-on experience using statistical tools and software to make data-driven decisions in practical scenarios.

Training Effectiveness Analysis: Measuring Impact and Growth

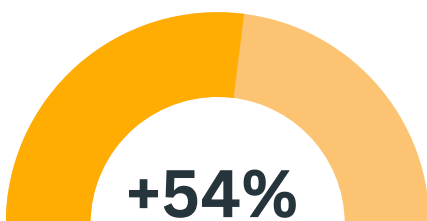
"Participants demonstrated remarkable improvements in their understanding and application of statistical techniques, highlighting the program's success in enhancing confidence and proficiency in data analysis and decision-making."



Core Statistical Foundations



Data Exploration & Decision Making

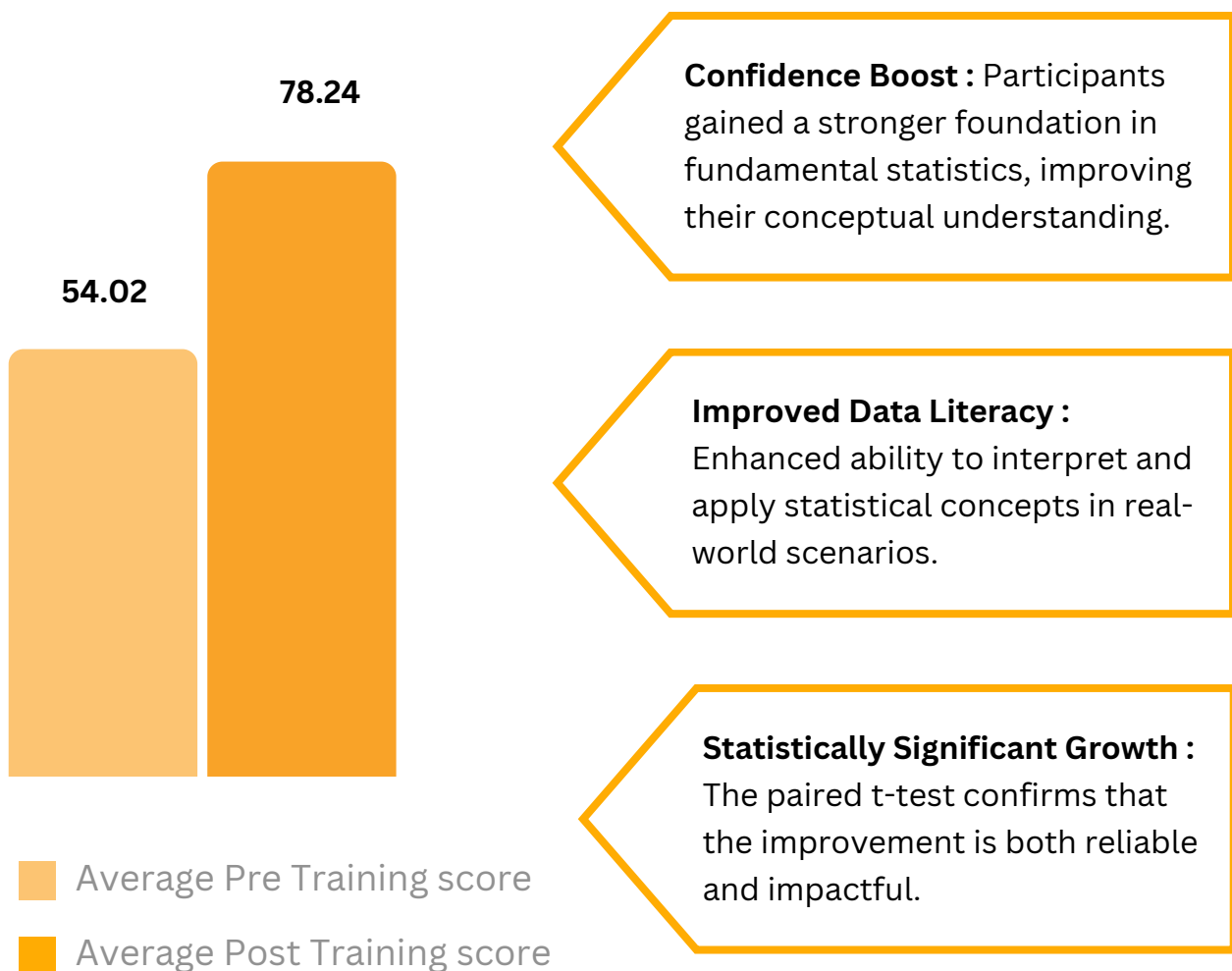


Statistical Analysis & Real-World Applications

Statistical Foundations

This domain focused on participants' ability to summarize, interpret, and make inferences from data. The training aimed to enhance their statistical reasoning and data-driven decision-making skills. Results showed noticeable improvement in participants' ability to analyze and infer meaningful insights from data.

"The training program effectively strengthened participants' foundational knowledge, increasing their confidence and accuracy in applying basic statistical concepts."



Key Results:

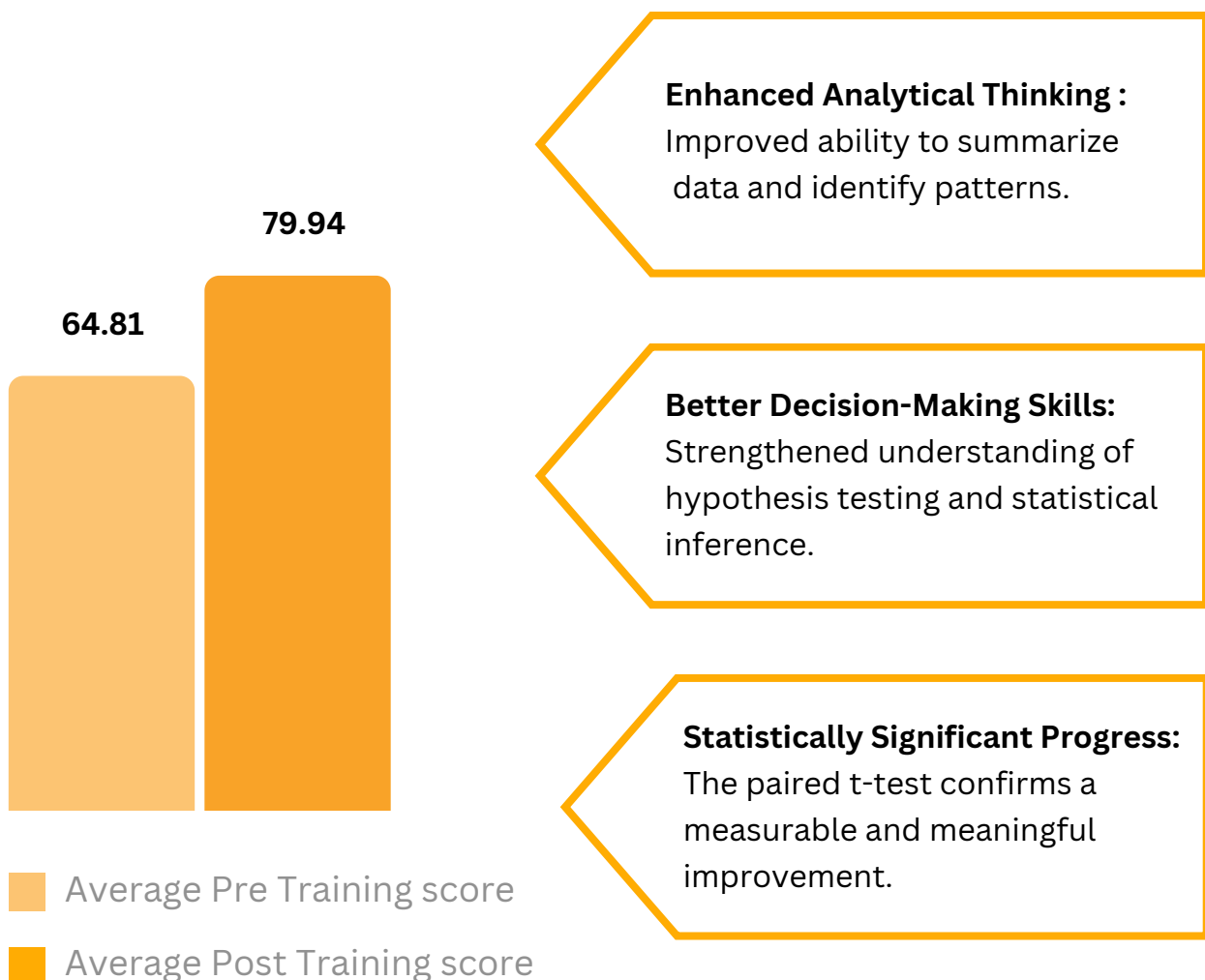
Mean Improvement : 44.82

p-value : < 0.001(indicating statistically significant growth).

Data Exploration & Decision Making

This domain focused on participants' ability to summarize, interpret, and make inferences from data. The training aimed to enhance their statistical reasoning and data-driven decision-making skills. Results showed noticeable improvement in participants' ability to analyze and infer meaningful insights from data.

"Post-training results indicate a clear enhancement in participants' ability to analyze and interpret data effectively, enabling them to make informed statistical conclusions"



Key Results:

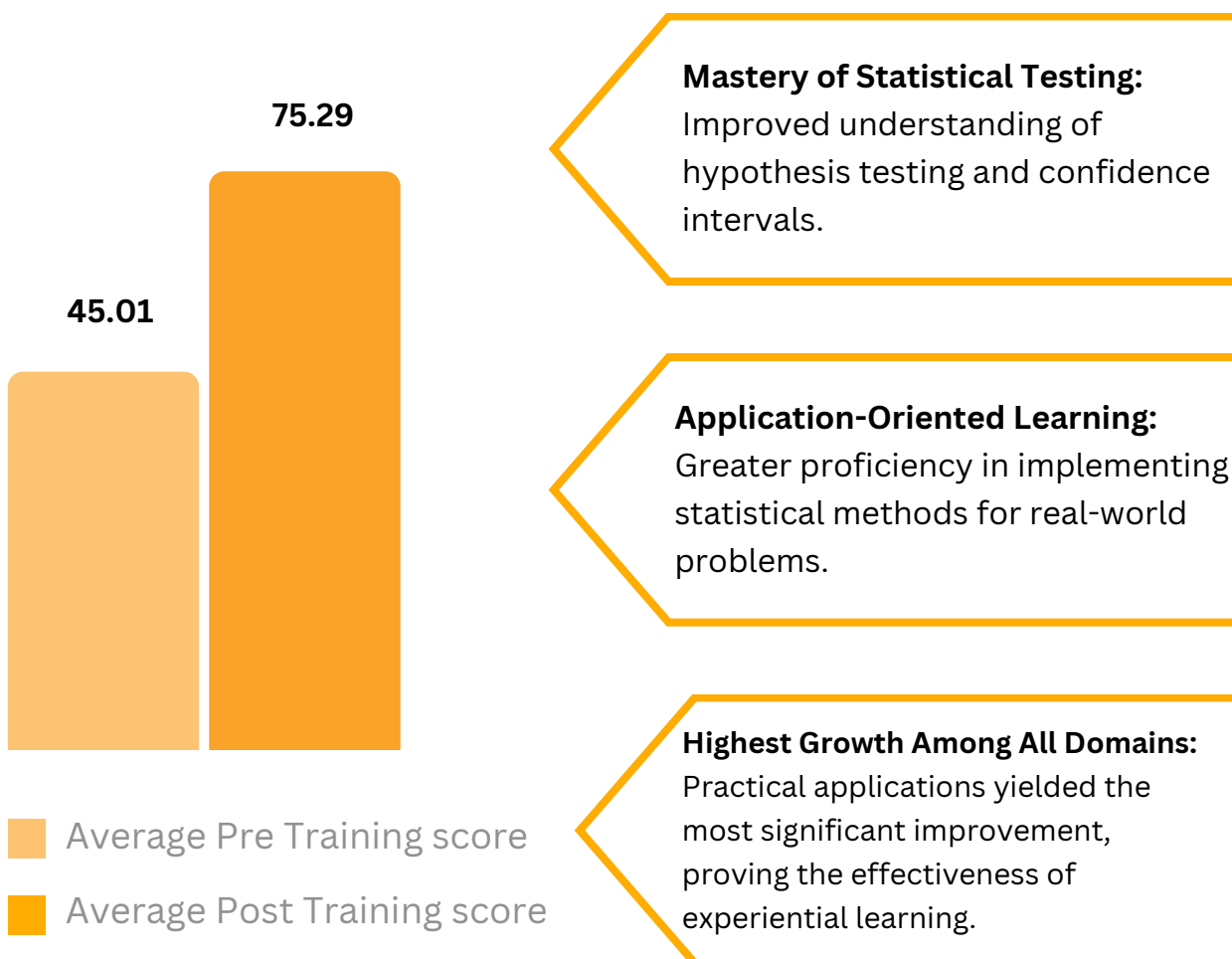
Mean Improvement : 23.34

p-value : < 0.001 (indicating statistically significant improvement)

Statistical Analysis & Real-World Applications

This domain emphasized the practical application of statistical methods, including hypothesis testing and real-world problem-solving. The training equipped participants with hands-on skills to conduct statistical tests and draw valid conclusions. Results revealed the highest improvement in this category, highlighting the effectiveness of an applied learning approach.

"The substantial increase in post-training scores reflects participants' enhanced ability to apply statistical tests effectively, demonstrating strong analytical and problem-solving skills."



Key Results:

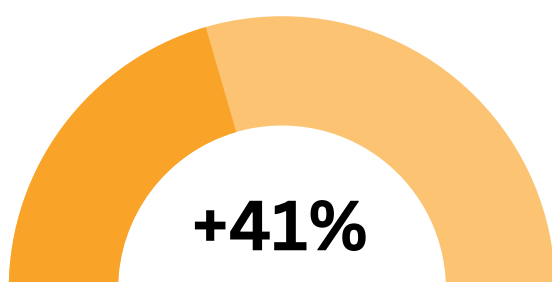
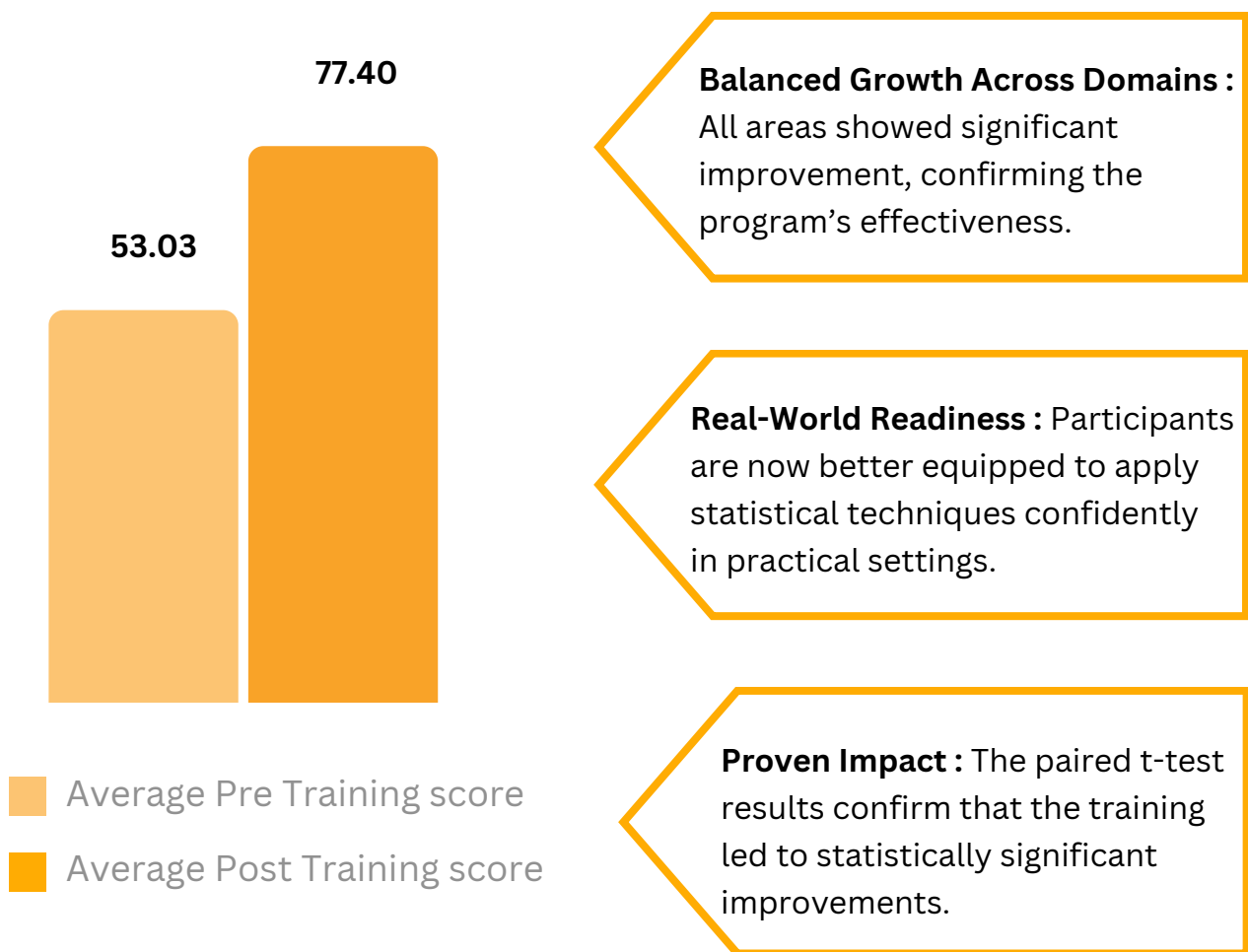
Mean Improvement : 53.62

p-value : < 0.001 (confirming a statistically significant improvement).

Overall Effectiveness

The overall results demonstrate a comprehensive improvement across all domains, showcasing the program's success in enhancing statistical proficiency.

"The training program resulted in a remarkable overall improvement, with participants achieving a 40.66% increase in their proficiency across all key areas of excel."



Key Results:

Mean Improvement : 40.66
p-value : < 0.001 (confirming a statistically significant improvement).

Conclusion

The MS Excel Bootcamp: Introduction to Statistics with Excel effectively enhanced participants' statistical proficiency and data analysis skills, equipping them with essential tools for real-world applications. The program's structured approach ensured comprehensive learning, leading to key improvements:

- The overall proficiency increased by 40.66%, demonstrating the effectiveness of hands-on training in statistical techniques.
- Pre- and post-training assessments showed a significant improvement in participants' confidence, with the average test scores rising from 55.03% to 77.40%.
- Descriptive and inferential statistical techniques, including hypothesis testing were effectively reinforced through real-world datasets.
- The bootcamp attracted a diverse group, including students, educators, and professionals, fostering interactive learning and practical discussions.

Expert-led sessions by **Dr. Jitto Jose** played a crucial role in simplifying complex statistical methods, making them more accessible and applicable.

The paired t-test results confirmed the statistical significance of the improvement, reinforcing the bootcamp's success in delivering measurable learning outcomes.

Building on this success, Infocrita is eager to expand its impact with the upcoming programs, aimed at deepening participants' expertise in advanced statistical modeling and data-driven decision-making. Stay connected for more learning opportunities under the Upskill 2025 initiative, as we continue our commitment to equipping individuals and organizations with essential analytical skills for the evolving data landscape.



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