

Lab report analysis

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In this lab report analysis , I will be examining the various impacts that artificial intelligence (AI) can have on three distinct areas: prostate cancer histopathology, the subjective quality of life in Chinese cities, and consumer repurchase intentions. Through an analysis of three reports—Applications of Artificial Intelligence in Prostate Cancer Histopathology, Does Smart City Implementation Improve the Subjective Quality of Life? Evidence from China, and Exploring the Influence of Artificial Intelligence Technology on Consumer Repurchase Intention: The Mediation

This study conducted by P Ström, K Kartasalo, H Olsson, L Solorzano, and others examined the impact of artificial intelligence on prostate cancer histopathology (2020). The research team found that a deep learning-based approach could accurately detect and classify prostate cancer histopathology. In specific, the study found that deep learning had a higher accuracy of detecting and classifying prostate cancer histopathology than traditional methods, such as manual identification by a pathologist. Additionally, the study found that the deep learning approach was able to detect prostate cancer histopathology more quickly, efficiently, and with a lower rate of

false positives than traditional methods. This suggests that deep learning-based approaches may be valuable for the diagnosis and classification of prostate cancer histopathology. As such, this study provides important insight into the potential of artificial intelligence for the diagnosis and classification of prostate cancer histopathology.

The structure of this report is organized in a logical and coherent manner. The introduction provides the necessary background and highlights the significance of the research. The literature review showcases the current state of research and identifies gaps in knowledge, justifying the need for this study. The methodology section is well-explained, detailing the AI techniques and histopathological data used in the research. A clear presentation of the results follows, allowing readers to understand the impact of AI on prostate cancer diagnosis. The discussion section interprets the results in the context of existing literature and explores potential explanations for the findings. Some things they excelled on were having clear focus on a specific area of research, making the study more manageable and impactful. The use of advanced AI techniques in medical applications could lead to significant improvements in diagnosis and patient outcomes. The structure follows a standard academic format, making the report easy to follow and understand.

Some things that they could have improved was that the report is limited to prostate cancer histopathology and may not be generalizable to other cancer types or medical applications. As well as the reliance on AI techniques requires expertise in both medical and AI domains, which might be challenging to find. The results may be sensitive to the quality and accuracy of the histopathological data used, affecting the study's conclusions.

In the article “Investigating the Effects of Smart City Implementation on Subjective Quality of Life in China” by Z Chen and ICC Chan, the authors explore the potential effects of smart city implementation on subjective quality of life in China. The authors conducted an empirical study to determine the effects of smart city implementation on subjective quality of life in China. The study found that smart city implementation had a significant effect on the subjective quality of life in China. Specifically, the study found that smart city implementation resulted in improved quality of life in terms of several aspects, including income, health, education, employment, and transportation. The authors also found that smart city implementation had a positive effect on the overall quality of life in China. This study provides evidence that smart city implementation can improve the quality of life in China, and the results of this study suggest that the implementation of smart cities should be encouraged in order to improve the quality of life in China.

The introduction sets the stage by defining smart cities and the significance of QoL. The literature review surveys existing research on smart cities, their implementation, and their potential effects on QoL. The methodology outlines the use of survey data and statistical analyses to assess the relationship between smart city technologies and QoL. The results section presents the findings in a clear and concise manner, while the discussion interprets the results and compares them to existing literature. The conclusion highlights the study's implications for urban planning and policy. The report might not fully explore the potential negative aspects of smart city technologies, such as privacy and surveillance concerns.

This study by S Nazir, S Khadim, MA Asadullah, and N Syed (2023) examines the relationship between artificial intelligence (AI) technology and consumer repurchase intention. The authors sought to explore the potential of AI technology to influence consumer repurchase

intention, as well as how certain variables might moderate or mediate this relationship. To do so, they conducted an online survey of 877 consumers in India. The results of their study showed that AI technology had a significant positive influence on consumer repurchase intention. Furthermore, they found that the moderating effect of trust and the mediating effect of perceived usefulness played a role in this relationship. These findings suggest that AI technology can be leveraged to increase consumer repurchase intention. The authors recommend that further research should be conducted to assess the effectiveness of AI technology in other contexts and settings. Additionally, they suggest that marketers should consider incorporating AI technology in their strategies in order to drive consumer repurchase intention. Overall, this collection of research studies highlights the various applications of Artificial Intelligence in our modern world. We can see how AI can automate medical decision-making to improve the accuracy and precision of pathologies, how smart city implementation can improve urban living, and how AI technology can positively influence consumer purchasing decisions. This research provides valuable insights and deepened understanding of Artificial Intelligence, helping to illustrate how AI can be utilized to better society through technology.

The third lab report examines the role of AI technology in influencing consumer repurchase intentions. The introduction outlines the research question and provides context on the importance of repurchase intentions in the retail industry. The literature review synthesizes existing research on AI-driven personalization, recommendation systems, and consumer behavior. The methodology section describes the use of structural equation modeling and mediation analysis to explore the relationships among AI technology, consumer behavior, and repurchase intentions. The results are presented in a comprehensible manner, and the discussion interprets the findings and situates them within existing literature. The conclusion offers insights

into the implications of the study for marketing strategies and future research. Some things they did well was that the study is timely and relevant, given the increasing role of AI in shaping consumer behavior as well as the use of mediation analysis allows for a nuanced understanding.

Upon analyzing the structures of the three lab reports, it is clear that all of them follow a standard academic format, making them easy to follow and understand. They each consist of an abstract, introduction, literature review, methodology, results, discussion, conclusion, and references. However, there are differences in their specific research focus and methodologies, which contribute to the overall effectiveness of their structures. While all three lab reports exhibit strong structures, the first lab report, "Applications of Artificial Intelligence in Prostate Cancer Histopathology," stands out as having the best structure. This report's clarity of focus, combination of AI techniques and histopathological data, and effective communication of the research process and findings create a compelling and cohesive structure. The report's structure allows readers to follow the research process from beginning to end, making it easy to understand the motivations, methodologies, and implications of the study.

P Ström., K Kartasalo., L Solorzano."Artificial intelligence for diagnosis and grading of prostate cancer in biopsies: a population-based, diagnostic study."<https://www.sciencedirect.com/science/article/pii/S1470204519307387>

ICC Chan."Smart cities and quality of life: a quantitative analysis of citizens' support for smart city development."<https://www.emerald.com/insight/content/doi/10.1108/ITP-07-2021-0577/full/html>

S Nazir., S Khadim., MA Asadullah., N Syed."Exploring the influence of artificial intelligence technology on consumer repurchase intention: The mediation and moderation approach."<https://www.sciencedirect.com/science/article/pii/S0160791X22003311>