ASSIGNMENT-1

Failed Analytics Project Real-World Case

INTRODUCTION

Analytics projects have become increasingly important in organizations, as they provide valuable insights that can inform decision-making, improve efficiency, and drive innovation. However, not all analytics projects are successful, and many fail to deliver the expected results. The failure of an analytics project can be costly, both in terms of time and resources, and can damage an organization's reputation.

CASE STUDY

IBM's "Watson for Oncology" Cancelled After $62 million investment and Unsafe Treatment Recommendations

IBM has been involved in healthcare for many years, and the company has developed a range of products and services designed to improve patient care, reduce costs, and advance medical research.

Watson Health: Watson Health is a division of IBM that uses artificial intelligence and data analytics to provide insights into patient care, drug development, and clinical research. Watson Health offers a range of products and services, including clinical decision support systems, population health management tools, and research platforms.

IBM's "Watson for Oncology" was a highly anticipated AI system designed to help doctors and healthcare providers make cancer treatment recommendations based on the latest medical research and clinical guidelines. The system was intended to analyse patient data and provide personalized treatment options to doctors, who would then make the final decision on the best course of action. The development of Watson for Oncology was a massive investment for IBM, costing $62 million in research and development. The company had high hopes for the system, which they believed would revolutionize cancer treatment and improve patient outcomes.

REASONS FOR THE FAILURE OF ANALYTICS PROJECT (IBM's "Watson for Oncology")

After years of development and testing, IBM announced in 2019 that they were cancelling the project. The decision was made after reports that Watson for Oncology was providing unsafe treatment recommendations and that its accuracy was called into question. A report from STAT News claimed that Watson for Oncology was providing incorrect and unsafe treatment recommendations based on flawed data.

The report found that Watson for Oncology had been trained using biased data sets and had not been properly tested before being deployed in hospitals. This led to some patients receiving treatments that were not effective or even harmful. The report also found that Watson for Oncology was often unable to provide any recommendations at all, leaving doctors to rely on their own expertise.

The issues with Watson for Oncology highlighted some of the difficulties and dangers of utilizing AI in healthcare. AI must be developed and implemented in a responsible and ethical manner if it is to revolutionize healthcare and enhance patient outcomes. In order to protect patients from damage, it is crucial to make sure that AI systems have undergone extensive testing and validation before being utilized in clinical settings.

In addition to the problems with the system's accuracy, there were also concerns about its high cost. IBM charged hospitals $200,000 per year to use Watson for Oncology, making it too expensive for many healthcare providers to adopt.
Despite the cancellation of Watson for Oncology, IBM has continued to invest in AI for healthcare. The company has shifted its focus to developing AI systems that can assist with other aspects of patient care, such as medical imaging and electronic health records.

The case of Watson for Oncology is a reminder that while AI has enormous potential to improve healthcare, it must be approached with caution and a commitment to responsible development and deployment. With careful planning and testing, AI can play a vital role in improving patient outcomes and transforming healthcare.

MEASURES THAT CAN BE RECOMMENDED TO PREVENT THESE ERRORS

The cancellation of IBM's "Watson for Oncology" is a significant setback in the field of healthcare, and it is essential to address the issues that led to its failure to prevent similar incidents in the future. Here are some steps that could be taken to solve this problem:

- **Improve the accuracy of the AI system**: IBM's "Watson for Oncology" made unsafe treatment recommendations, which resulted in its cancellation. Therefore, it is crucial to improve the accuracy of AI systems before they are deployed in real-world applications. This can be achieved by training the AI system on large, diverse datasets and using rigorous validation methods to ensure that it performs well on different types of data.

- **Involve experts in the development of AI systems**: It is essential to involve medical experts, including oncologists, in the development of AI systems for healthcare. This can help ensure that the AI system considers the latest medical research and clinical guidelines and that it also provides safe and effective treatment recommendations.

- **Increase transparency and accountability**: The development and use of AI technologies in healthcare should be more transparent and accountable. This can be accomplished by disclosing information about the performance metrics, training data, and algorithms used by the AI system. The use of AI in healthcare should also be subject to explicit rules and laws, with consequences for those who violate them.

- **Foster collaboration between technology companies and healthcare providers**: Collaboration between technology companies and healthcare providers can help ensure that AI systems are designed to meet the needs of patients and healthcare providers. This can include partnerships to develop and test AI systems in real-world clinical settings, as well as initiatives to share data and expertise between the two sectors.

By taking these steps, we can address the issues that led to the failure of IBM's "Watson for Oncology" and pave the way for safe and effective AI systems in healthcare.

As of September 2021, IBM's "Watson for Oncology" had been discontinued, and the company had announced that it was ending its sales and marketing efforts for the product. The decision to discontinue the product came after a series of reports by media outlets, including the Wall Street Journal, raised concerns about the accuracy and safety of Watson for Oncology's treatment recommendations.

According to the reports, Watson for Oncology had been recommending unsafe and incorrect treatment options for cancer patients, causing concern among healthcare providers and patients alike. Additionally, the reports suggested that Watson for Oncology's performance was not living up to the high expectations set by IBM, which had invested heavily in the product.

In response to the reports, IBM defended the product, stating that it had undergone extensive testing and validation and that its recommendations were based on the latest scientific evidence. However, the company acknowledged that Watson for Oncology had not been adopted as widely as it had hoped and that it would be focusing its efforts on other healthcare initiatives.

CONCLUSION

To avoid the failure of analytics projects, it is essential to have a well-defined project plan that outlines the goals and objectives, identifies the data requirements, and specifies the methods and techniques to be used. It is also essential to ensure that the data used is accurate, relevant, and appropriate for the problem being addressed. Building a skilled and experienced project team, with a range of expertise in data management, statistics, and machine learning, is also critical. Communication is key to the success of analytics projects. Effective communication ensures that stakeholders are informed about the project's progress, and expectations are aligned. Regular monitoring and evaluation can also help identify issues early and enable timely corrective action.

REFERENCES

https://blog.sepstream.com/reasons-why-ibm-watson-flopped-in-the-healthcare-industry/
https://www.lexalytics.com/blog/stories-ai-failure-avoid-ai-fails-2020/
https://www.thecasecentre.org/products/view?id=182969
https://www.simplilearn.com/what-to-do-when-your-project-is-bound-to-fail-article