



daisy.

DATA SCIENCE USE CASES: HEALTHCARE

Delivering innovative
solutions to exploit the
power of data science.

daisyuk.tech



Healthcare organisations generate enormous amounts of disparate data every year. With the widespread use of wearable devices and large-scale adoption of digital transformation programmes, the amount of data created each day is growing exponentially. Data science presents a significant opportunity to harness these volumes of data to gain a deeper understanding of the human body and ultimately improve the care healthcare organisations can provide.

Without a doubt, data mining, analytical platforms and the explosion of big data have the power to revolutionise the healthcare sector.

Below we take a look at five data science use cases in the healthcare industry

1. Improve diagnostic accuracy

The NHS pays out millions of pounds every year due to missed diagnosis or misdiagnosis. By unlocking the power of big data and analytics, healthcare providers can improve diagnostic accuracy and improve patient recovery whilst saving money.

Making use of innovative data science technologies such as machine learning and predictive analytics, doctors can make use of historical patient data including clinical notes, symptoms, habits, previous illnesses to greatly improve the accuracy of their diagnosis.

2. Trigger real-time alerts

The cost of patient care is rising all the time however, monitoring health statistics of the patient is vital for enhanced care. With the advent of wearable devices, it is now possible to monitor the vital statistics of the patient virtually and provide real-time medical assistance when needed. The wearable devices will collect patient data

and store it in the cloud, which is accessible for the care managers and providers. For example, when there is an alarming change in the blood pressure of a patient, the system alerts the care giver who can take appropriate action to treat the patient.

3. Improve patient engagement

Today's healthcare organisations follow a value-based care approach where patient engagement plays a significant role in the long-term treatment plan.

It has now become a priority for healthcare providers to increase patient participation in the treatment plan and they invest primarily in developing strategies to meet the expectations of the patient community. Healthcare providers can use data analytics to ensure that patients actively participate in their care whilst machine learning, artificial intelligence, and natural language processing can be used to draw actionable insights and develop predictive risk scores to improve care coordination. This is particularly useful for patients undergoing chronic disease management plans.

4. Simplify internal staffing processes

Planning the number of staff required at any given time is a common challenge across all forms of healthcare. Too many staff becomes a waste of resource whilst too few leads to poor customer care.

Deploying predictive analytics to look at historical and demographic information can help determine the number of staff required in particular departments at any given time, streamlining the staff management process and ultimately driving up the level of care provided to the patients.

5. Reduce visits to the doctor

With the aid of artificial intelligence, mobile applications are now capable of providing healthcare support. Patients can describe the symptoms, ask queries, and take advice and suggestions from the intelligent chatbots anytime instead of waiting for the doctor's appointment.

Technology can also be used to provide timely reminders about the medicines and treatment strategies and can help in fixing an appointment with the doctor where necessary.

AI-based apps are beneficial for both patients and doctors. They save time for doctors meaning they can focus on more critical cases and patients can get access to round the clock assistance without the need to visit a surgery

In conclusion...

Data Science is a rapidly growing function that is becoming more and more in demand as organisations start to realise and reap the rewards it brings.

The massive amounts of data created within healthcare means that data science will have an ever-increasing important role to play in the future of the industry.

Big data and predictive analytics will transform the way healthcare is provided, improving both the quality and time taken to access care.

The myriad of data science solutions available means that these techniques can be applied across the full spectrum of healthcare services, from primary care through to A&E, long-term and mental healthcare, ultimately improving the quality of life for all of society.

At Daisy, we have the expertise and knowledge to guide businesses on this new data journey to help make better sense of their data. Digital data transformation is now at the forefront of making critical business decisions more easily.



NEXT STEPS

If you want to find out how Daisy can help you harness the power of data science contact us on:

0344 863 3000

Or if you're an existing customer, get in touch with your account manager directly.