

## CASE STUDY

# Healthcare

Text mining social media and applying sentiment analysis uncovers surprises

## Customer

Multi-National Pharmaceutical Firm

## Location

Europe

## Industry

Healthcare

*“But, in today’s world, if patients experience problems with medications or medical devices, or if they have a great experience, they tell their friends, often on Facebook and Twitter.”*

## The Challenge

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A giant pharmaceutical firm was looking for customer feedback. It wanted to know what people liked about its products. Did people prefer the company’s product over other products? Did these preferences develop and change over time? In addition, the company was legally required to report any adverse product reactions, so a connection to customers was doubly important. Unfortunately, because the majority of the products are prescription drugs and not sold over-the-counter, the firm’s primary connection is through the doctors and pharmacists and only indirect communication channels exist. This can make it difficult to get customer feedback, positive or negative.

## The Results

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Social media analysis uncovered several surprises, many of which would hardly have been discovered with even the biggest and most costly market research attempts. For example, a larger than anticipated population of customers were using their insulin for their pets. Far from unusual, as originally thought, many people reported to friends and family that they were doing it regularly.

## The Solution

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This firm focused on collecting publically available information with RapidMiner, primarily from the diabetic community, specialized diabetes forums, blogs and the major social networks. The information was in the form of millions of individual texts and posts per year, far more than could be reviewed by human eyes. Is this text about the company’s product? Is it about a competitor’s product? Is the post about the consumer’s desires about the product or is it from real experience? Once the appropriate texts were identified, RapidMiner’s sentiment analysis tools were used to determine whether each one was positive or negative.

Other posts uncovered a problem with a medical device. While not enough of an issue to cause patients to contact their doctors, they were not averse to posting pictures or messages about the inconvenience. This insight allowed the company to redesign the product to prevent the issue.