Machine learning trends in SA for 2017

Machine learning as a subset of artificial intelligence is an emerging trend in South Africa, with demand for data scientists rising sharply and university programmes incorporating the discipline in study programmes. However, still a long way behind international counterparts, South African machine learning trends for 2017 place focus on our unique and emerging market.

© Jakub Jirsak – 123RF.com

This is according to Daniel Schwartzkopff - commercial director and co-founder of Cape Town-based tech start-up and machine learning specialists, DataProphet, which has built a presence in the US and has therefore experienced the difference in industry trends first hand.

Schwartzkopff notes that the machine learning sector is really beginning to take form in South Africa with various start-ups taking off and entering the international scene.

DataProphet managing director, Frans Cronje says, "South Africa's diverse range of spoken languages makes it difficult to use existing personal assistants, chatbots and speech recognition tools which were designed solely for the English language. This is just one example of how approaches to machine learning need to be tailored to the local market."

"In addition, inequality in terms of income and high levels of poverty means that fewer people have the means to take part in the growing Internet of Things (IoT) trend. This is also influenced by lower levels of affordable smartphone, computer and data access," he adds.

Cronje highlights that, fortunately, South African companies, not generally known for their customer care, are starting to wake up to the possibilities of efficient customer relationship management (CRM) through bespoke products, targeted marketing and improved customer service.

Cronje shares his top four trends for machine learning in South Africa for 2017:

1. **Big Data**

   Until recently, there were only a few companies who had the expertise needed to handle large datasets. However, as Big Data 'know-how' continues to spread across local industries, organisations will begin to see the benefits of uncovering new insights and opportunities presented through previously untouched data.

   One way of using this data which has seen incredible growth is in segmentation - distinguishing customers based on their behaviour. Vodacom's 'Just 4 You' campaign, for example, enabled businesses to better understand their needs and provide a personalised experience while also improving profits.

2. **Chatbots**

   In a country where many digital and technological services are limited, chatbots are set to see steady increase in use cases as the technology graduates out of a being seen as 'gimmicky'. Their return will see an increase in assistance with legal and financial advice, medical diagnosis and customer support.

   ABSA has already introduced such a chatbot in the market, increasing the ways in which the bank engages with customers.

3. **Computer Vision**

   The near-human level performance of computer vision will definitely be a trend to watch out for in 2017. For example, useful in the South African retail industry, smart cameras may be able to identify when a shoplifting or a break-in occurs and then notify security services.

4. **Autonomous Worker Drones**

   Lastly, while smaller and far less technologically advanced drones made it onto the wishlists of teenagers over the festive season, advanced drone-mounted cameras are likely to gain popularity in South Africa this year. The efficiency of such technology is undeniable with the ability to battle rhino poachers by scanning large areas and reporting on the whereabouts of wildlife and people.

Beyond 2017, DataProphet highlights that industry players may want to keep the below considerations in mind.

- **Data is a gold mine**

  Keep in mind that while you may not be taking full advantage of your data, others are going to be efficiently using theirs and will therefore have a competitive edge over you. Machine learning has the ability to disrupt the market; driverless cars are just one example of this. Keeping up-to-date and adapting with the times is vital to avoid becoming obsolete.

- **Not all solutions are equal**

Off-the-shelf 'black-box' machine learning models and analysis tools often hide a myriad of algorithmic design decisions in exchange for usability resulting in the most common for all scenarios but also non-optimal solution for all scenarios. The use of such solutions can result in sub-optimal model performance or unintended, negative consequences. Many of the very best machine learning products are open-source and open-data which allow for the establishment of social-good machine learning applications that many may not have even considered yet.

For more, visit: https://www.bizcommunity.com