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Data science presents enormous opportunities in Africa

Harnessing data science for the greater good and the need for tech to encompass the African context, were the key themes in the address by development economist and radio presenter Ayabonga Cawe.

Cawe was speaking at the Explore Data Science Academy's recent graduation ceremony in Belmont Square, Cape Town. "Siri can't even pronounce my surname," the Xhosa speaking Cawe said, adding that this presented an enormous opportunity for an emerging fintech entrepreneur.

Cawe was addressing the 94 graduates of the Academy's first intake of learners of its 12-month Accredite Data Science Skills programme. The Academy had a 100% pass rate. This is a tremendous achievemen given that many of the learners had only a matric, when they came on to the programme.

"The full/empty mentality of 20th Century industrialists and manufacturers is a thing of the past – despite th best efforts of our politicians to drive this agenda in setting policy," Cawe said. "We should be looking instead at models of education and skills development that embrace continuous learning and the notion of livelihood as opposed to training for a job."

Cawe continued: "Tech has enabled vast areas of our lives to be measured in an unprecedented way. Sor services are predicated on the handing over of personal information, which can be used exploitatively, or f the greater good," he added.

He urged graduates to go back into their communities and share their knowledge, and experiences in so doing unlock the power of data for greater freedom.

New frontier

Co-founder of the EDSA, Dave Strugnell was overwhelmed by the performance of many of the graduates over the 12-month period. "Data Science is the new frontier in the digital economy and we have been encouraged by the aptitude of our learners for the tools and the thought process involved," he said.

“Many of our interns come from marginalised backgrounds so the results prove that matching aptitude with opportunity can overcome circumstances, and that it is possible to leapfrog talent into the digital economy he added

The EDSA was launched in September last year, with BCX as a founding sponsor committing to invest almost R50 million to fund 100 interns a year over three years.

The launch coincided with an appeal for applications from young South Africans aged between 17 and 35 for the 100 sponsored internships. Interested applicants had to apply online demonstrating their analytical and problem solving skills.

Global demand

The appeal resulted in over 10 000 online applications from throughout the country – from which EDSA’s team selected the top 100. The EDSA adopted a similar process for the selection of potential candidates for its 2019 learnership intake, which has quadrupled in number.

In addition, to BCX’s commitment, the EDSA has secured further sponsorship for 100 learners from Harambee and another 200 by various banks and insurance houses.

According to Shaun Dippnall, cofounder of the EDSA, the demand for data scientists locally more than justifies the 400% increase in the number of internships offered by the Academy, which will have a Johannesburg campus as well in 2019.

Qualified data scientists are in high demand. Research has shown that there is an estimated global shortfall of 2,5 million. In the US, for example, most positions for data scientists have not been filled.

The same is true in South Africa, where there is a growing need for data scientists in commerce and industry but, ironically, where unemployment among young people has reached crisis proportions.

Problem-solving

The year-long *Explore Data Science* programme comprises three modules. The first six months involves learning the foundations of data science, including foundational mathematics, applied statistics and probability, computer science fundamentals, machine learning and artificial intelligence.

Next comes three months of problem-solving projects, such as visualising data and predicting the future trends. The final quarter involves actual work experience at a corporate sponsor, where the student will solve real-world business problems in a team setting under the guidance of industry mentors.

“We have designed a course that closely mirrors the demands of the workplace and have added job immersion and self-paced project work, which lead to understanding team-working dynamics,” Dippnall concluded.