



DataHack4FI: Driving data science skills development in Africa

April 2020

The DataHack for Financial Inclusion (DataHack4FI) innovation competition encourages collaboration and skills development to promote the use of data and data analytics to solve financial and economic inclusion challenges, thereby extending valuable financial services to the underserved. The initiative seeks to create communities of innovation by convening emerging tech companies, data enthusiasts, innovation hubs, development partners and FSPs to stimulate the use of data for financial inclusion.

Despite the increasing availability of data and a growing appreciation for the importance of data-driven product design, there is a practical disconnect between the decisions being made for financial inclusion in Africa and the available data. This gap hinders the extent to which financial products and services meet the needs of excluded and underserved people. With data science still emerging as a career path for young Africans, a shortage of data science human capital is a key contributor to the disconnect. As financial institutions begin to recognise the power of data and the need to employ a greater level of data analytics in the design of product innovations, capable African data scientists are required to meet this demand.

Season 3 of DataHack4FI sought to contribute to data science skills development and the empowerment of African youths in a field that is increasingly providing opportunities for career advancement. By partnering with Microsoft and Liquid Telecom, aspiring data scientists from across Africa were given the opportunity to enrol for the Microsoft Professional Program (MSPP) in Data Science, an internationally accredited certification, via Liquid Telecom’s *21C Skills* digital education platform. Experienced data scientists were on hand to provide digital and in-person mentorship to the candidates as they worked to complete the course requirements.

Having successfully completed 10 theoretical data science modules and the CAPSTONE practical use-case project, **108 African data science enthusiasts** were awarded the Official Microsoft Certification.

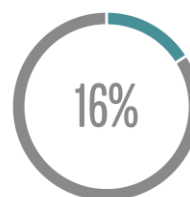
374 Enrollments | **108** Completions



Completion



Males



Females

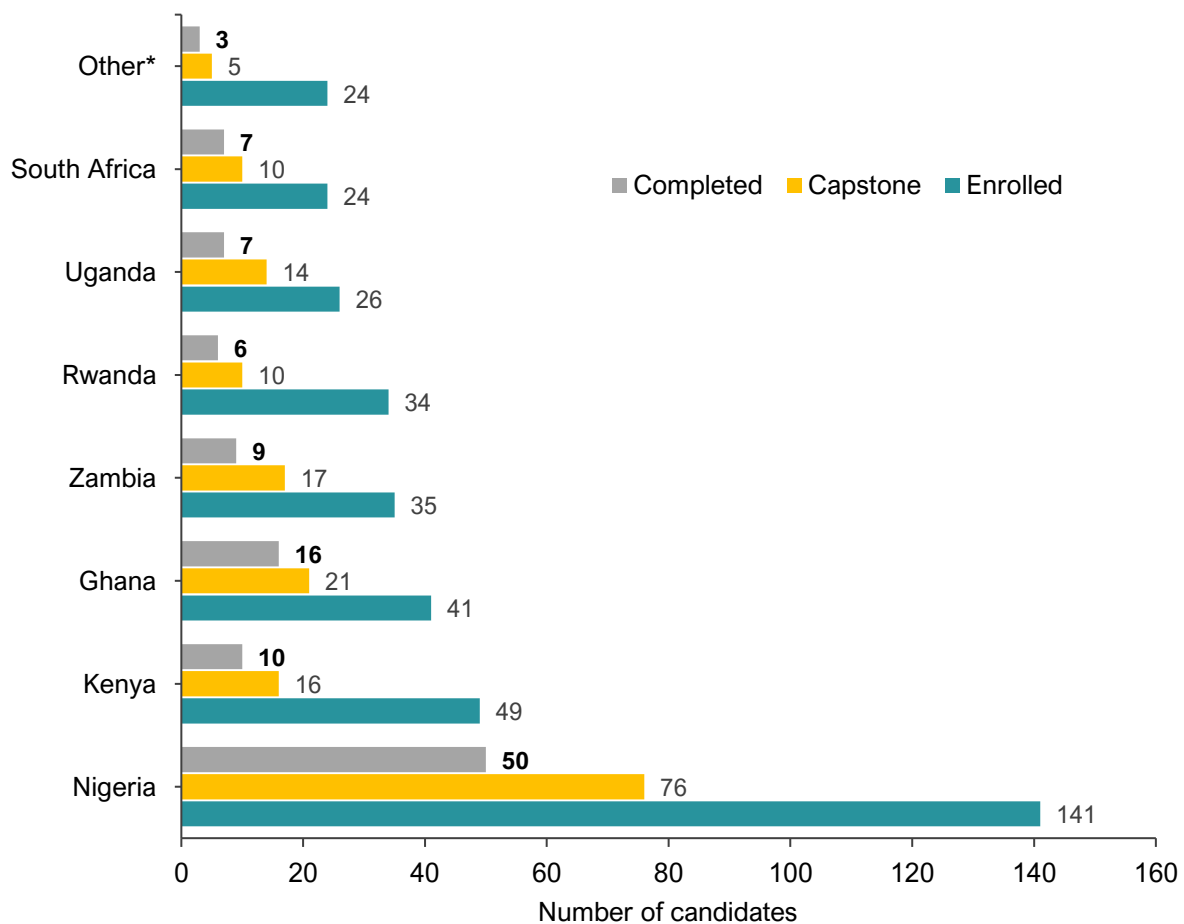


African youth

DataHack4FI's aspiring data scientists – in numbers:

- Total number of accepted applications (DataHack4FI data enthusiast applications): **619**
- Number of user registrations (signed up at 21cskills.africa): **441**
- Number of user course enrolments (active users): **374**
- Number of users qualifying for CAPSTONE (10 prerequisite modules): **169** (45% of enrolments)
- Number of users who successfully completed the certification: **108** (29% of enrolments)

Figure 1: Segmentation of participants by country



*Other: Zimbabwe (2), Mozambique (1)

A four-year study by HarvardX and MITx established that the average completion rate for massive open online courses (MOOCs) is limited to 5.5%¹. The DataHack4FI initiative was able to achieve a completion rate of **29% (108 certifications / 374 candidates)**, more than 5 times the expected success rate. This was accomplished by fostering a learning environment,

¹ Chuang, Isaac and Ho, Andrew, HarvardX and MITx: Four Years of Open Online Courses - Fall 2012-Summer 2016 (December 23, 2016).

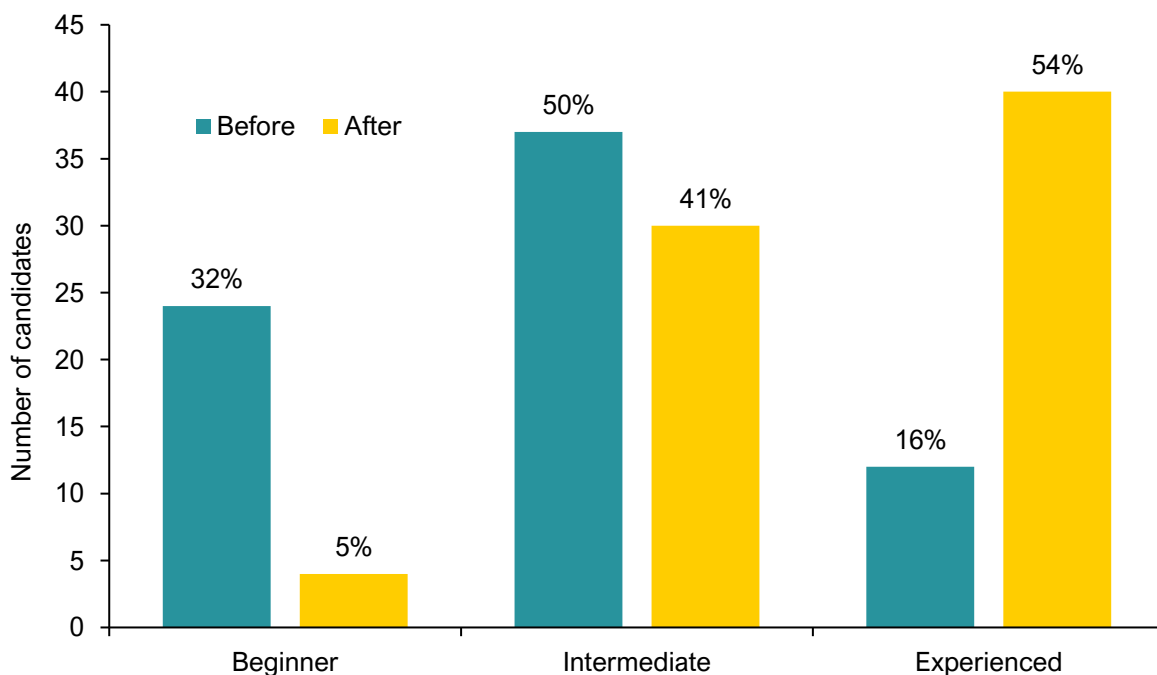
both offline and online, where candidates could engage data science experts and their peers, as they worked towards achieving the Microsoft Professional Program in Data Science:

- *The primary form of mentorship was digital, where candidates received support from two data science experts through a dedicated Slack messaging channel – which was able to attract 100-200 active users per week. (Value provided to data enthusiasts through digital mentorship was rated 3.9 out of 5).*
- *In-person study groups were organised in each of the 7 participating DataHack4FI countries. These sessions presented candidates with an opportunity to directly engage an experienced data scientist while completing course material alongside their peers. (Value provided to data enthusiasts through in-person mentorship was rated 3.7 out of 5).*
- *The DataHack4FI Community Facebook group offered candidates an additional portal to post course-relevant questions, engage their peers as well as experienced data scientists.*

The impact:

DataHack4FI’s aspiring data scientists developed both their theoretical data science knowledge and practical capabilities by enrolling in the MSPP data science training, with targeted support provided by experienced data science experts throughout the programme. Prior to enrolling, the majority of candidates considered their data science knowledge to be at a ‘beginner’ (32%) or ‘intermediate’ (50%) level. The MSPP resulted in a substantial increase in data science understanding among the cohort, with 54% (40 candidates) considering themselves as ‘experienced’ data scientists after the programme.

Figure 2: Data science knowledge before and after MSPP

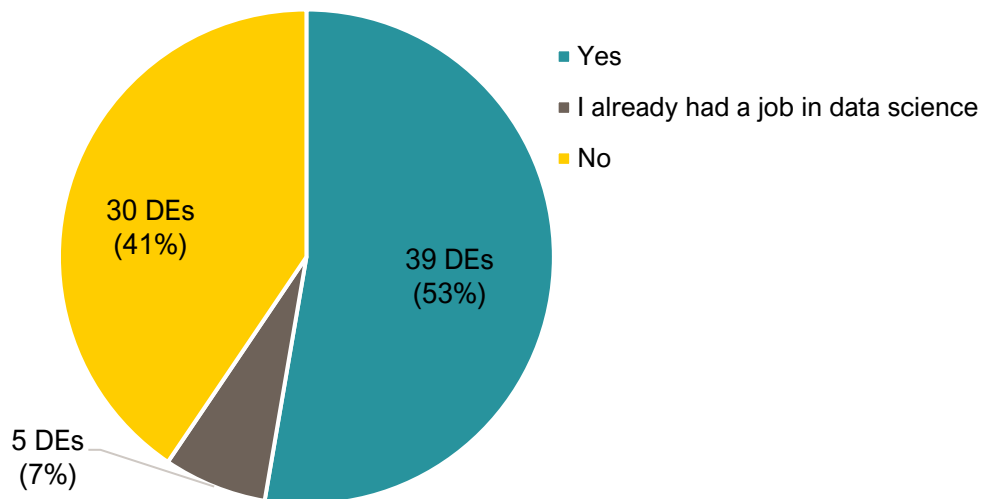


Source: DataHack4FI MSPP survey - 76 respondents

The DataHack4FI initiative directly impacted the career prospects of participants, resulting in a marked increase in employability among the cohort, with 85% of candidates (63 of 74 survey respondents) expressing an improvement in their employability – the perception of likelihood to obtain and maintain employment.

Thirty-nine candidates (39 respondents, 53%) who enrolled in the MSPP training have taken up either part-time or full-time data science-related employment since the end of DataHack4FI Season 3, representing 39 individuals who have successfully obtained data science jobs. The distribution of candidates who have obtained data-related jobs is shown below, where of the 39 candidates successfully entering employment; 17 have secured full-time employment, 15 part-time, and 6 have entered unpaid internships or tutoring.

Figure 3: Distribution of data science-related employment post-DataHack4FI



Source: DataHack4FI MSPP survey - 74 respondents

As the data science landscape in Africa matures, where organisations and institutions are gradually realising the value of adopting evidence-based business practices, there is a clear need for capable African data scientists who understand the context in which business challenges will need to be solved. By driving data science skills development and data-driven thinking throughout Africa, the DataHack4FI innovation competition is enabling the design of African solutions to African problems.

For more information visit: www.datahack4fi.org



How to find us

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