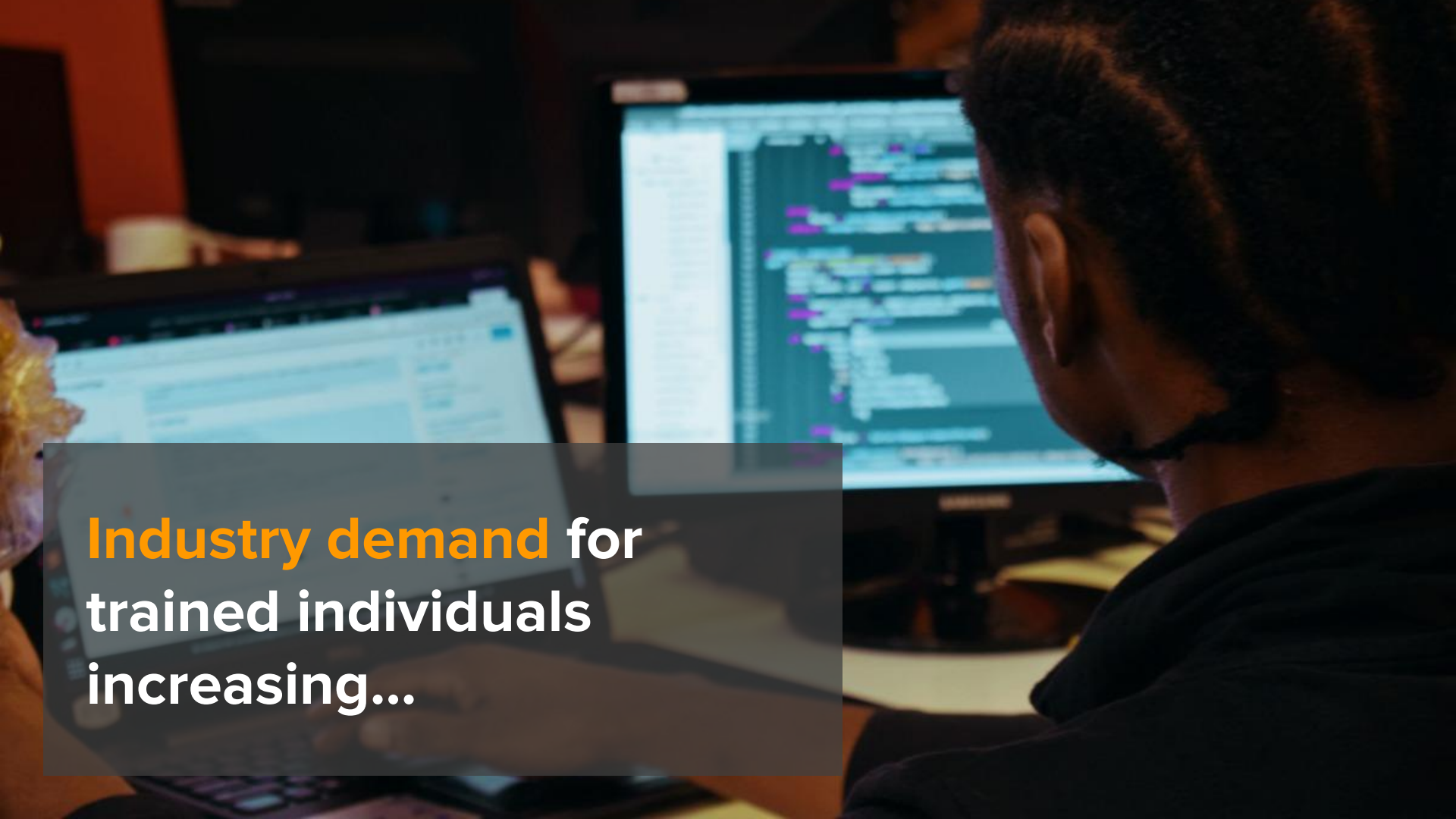


Growing young talent: Selecting and training the next generation of data scientists

Michelle Hoogenhout



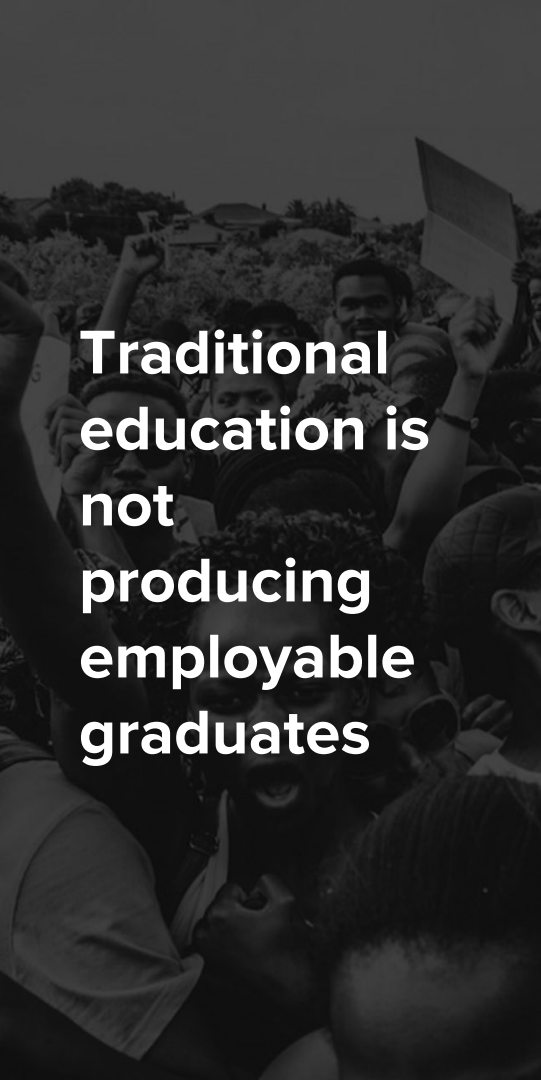
UMUZI

A person is seen from the back, sitting at a desk with multiple computer monitors. The monitors display various types of data, including what appears to be code on the right monitor and a data table or dashboard on the left monitor. The scene is dimly lit, with the primary light source being the screens themselves. A semi-transparent dark box is overlaid on the lower-left portion of the image, containing text.

Industry demand for
trained individuals
increasing...



... yet **millions of talented young people** are not reaching their potential.



Traditional
education is
not
producing
employable
graduates

47.9%

47.9% of
university
students did not
complete their
degrees.

32.1%

Black students
had the highest
dropout rate, with
32.1% leaving in
their first year.

Graduates are
not work-ready

How can we develop underserved individuals?





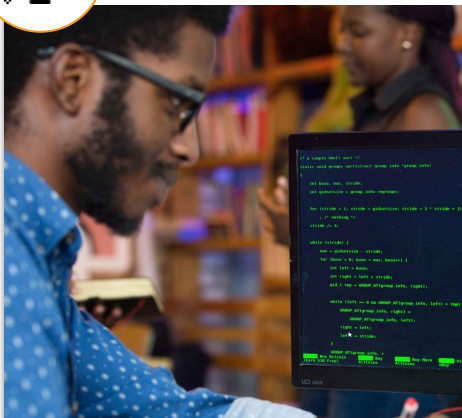
Technology



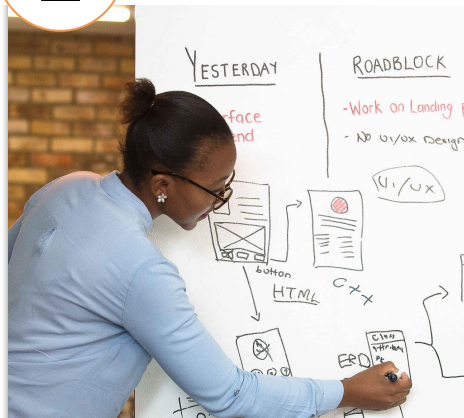
Strategy



Creative



- Full-Stack Web Dev
- Data Engineer
- Data Scientist

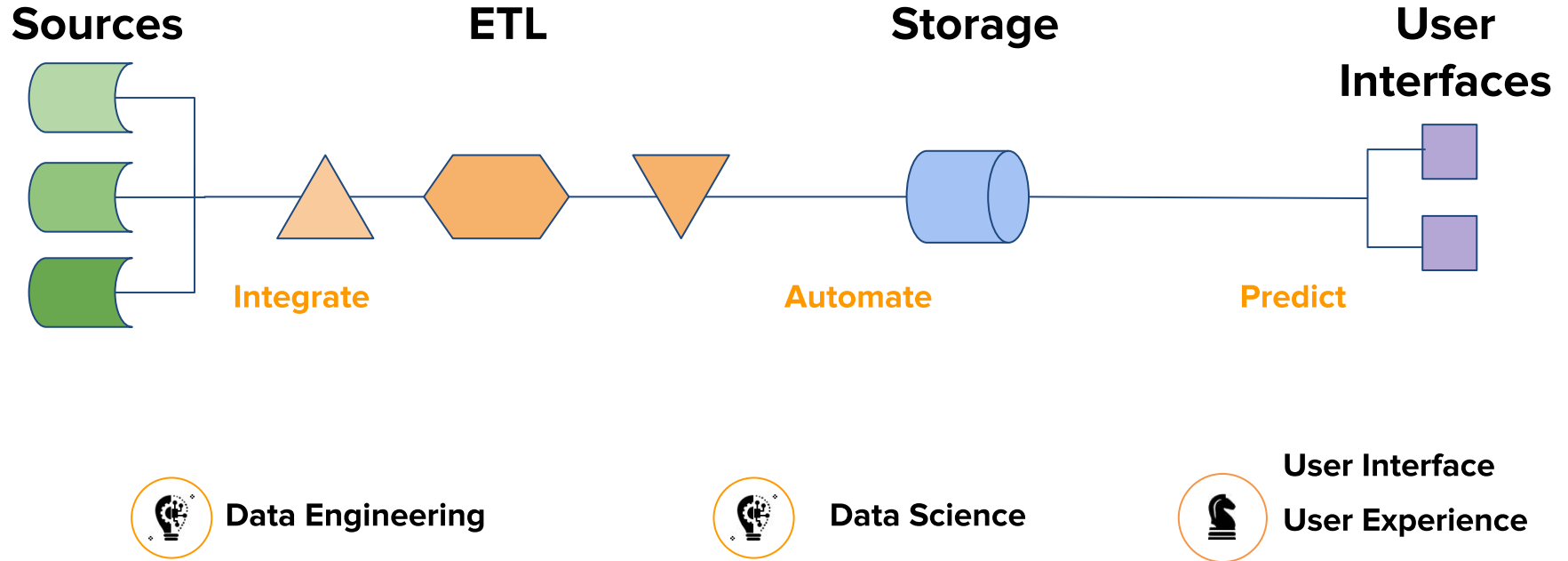


- Experience Designer (UX)
- Business Analyst
- Data Analyst



- Interface Designer (UI)
- Copywriter
- Multimedia Content Producer

Career tracks in the data lifecycle



Recruit young people through our online platform



>25,310



3,877



18,989



2,444

ONLINE
LEARNING

ASSESSMENT

INTERVIEWS

BOOTCAMP

LEARNERSHIP

ALUMNI

±13,000

125

377

How do we assess potential?

Automated online process



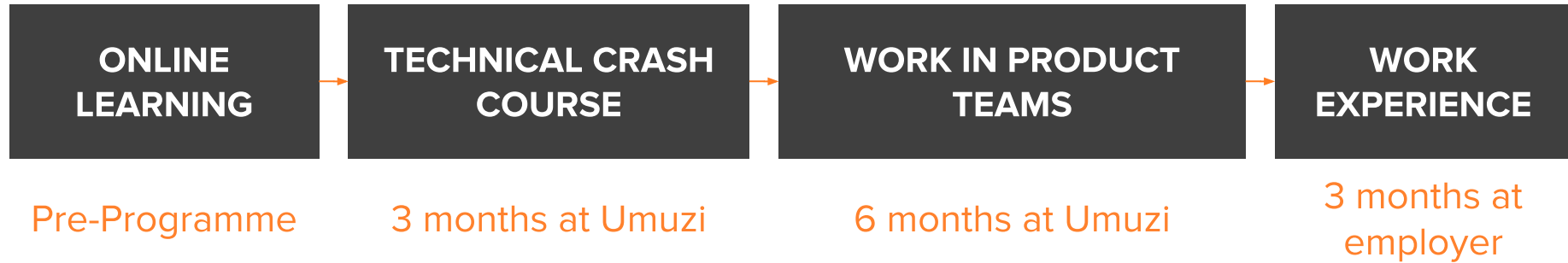
Practical tests



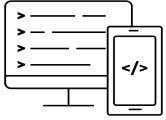
Professionalism



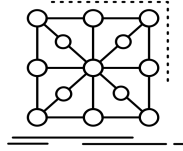
Umuzi's 12 month learnership/bursary programme upskills young people for high-value careers



What do we teach in the data science department at Umuzi?



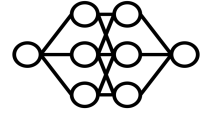
Basic **programming**



Getting, cleaning and transforming data



Summary **statistics and visualisation**



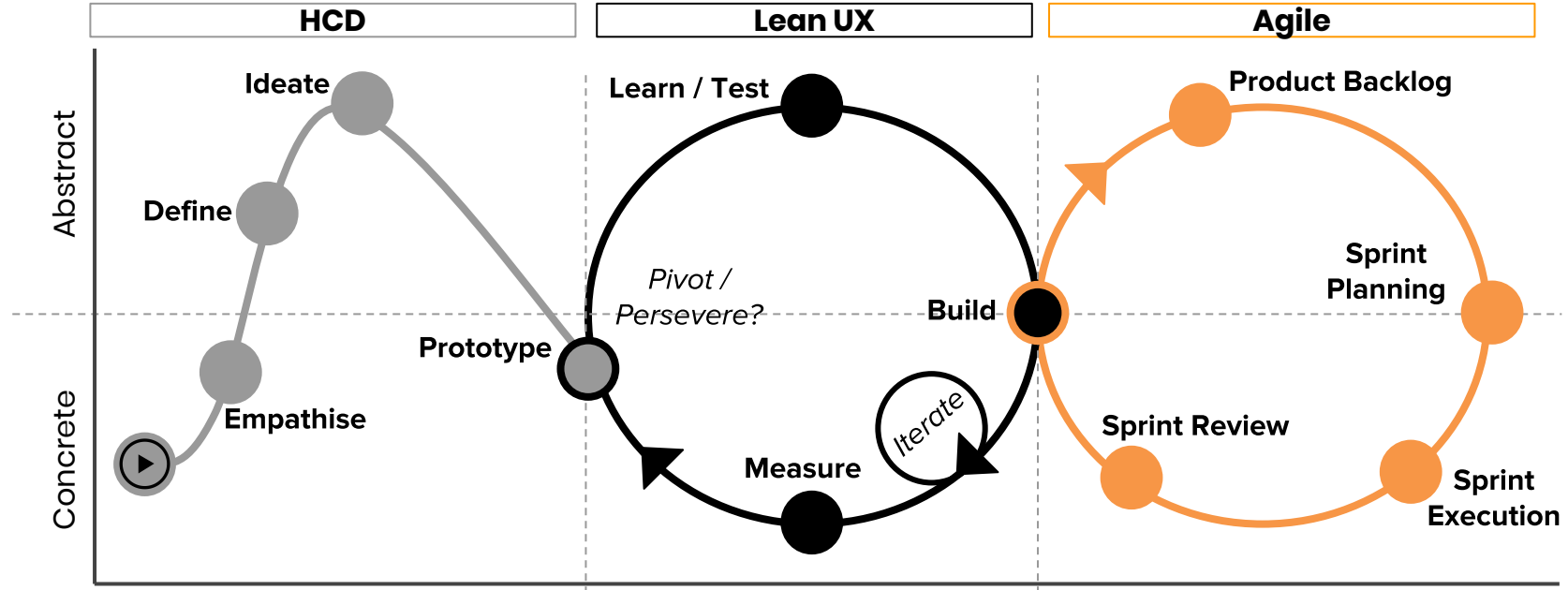
Machine learning

Shared
Processes

Agile

Design Thinking

Collaboration across the product development process



Classify smart-meter users

Recognise credit buying and electricity consumption patterns

Identify fraudulent behaviour and anomalous measurements





Case Study: Umuzi Recruitment Portal



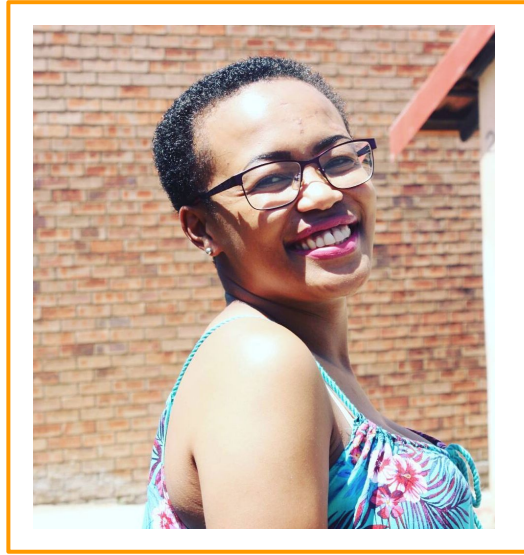
Managing expectations: what are the differences?

problem solving, communication, interaction

theoretical vs practical

Challenges

- Convincing employers to employ non-grads as data scientists
- Length of programme to teach curriculum?
- Psychological baggage
- Scaling
- Demand - companies not ready yet



Success stories | Bukelwa Moerane



Founder [@Inclined.mark](https://www.inclined.mark), Neuromarketing, Digital Marketer,
Influencer , Entrepreneur



Thank you

Github curriculum:

<https://github.com/Umuzi-org/master-reference>

michelle.hoogenhout@umuzi.org