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ISMAIL CHAKRANE

has successfully completed

Tools for Data Science

an online non-credit course authorized by IBM and offered through Coursera

Three handwritten signatures in black ink, stacked vertically. The first signature is "Maureen McElaney", the second is "Romeo Kienzler", and the third is "Svetlana Levitan".

Maureen McElaney
Romeo Kienzler
Svetlana Levitan

COURSE
CERTIFICATE



Verify at:

<https://coursera.org/verify/FBMB98WV9XD5>

Coursera has confirmed the identity of this individual and their participation in the course.