



Nov 9, 2022

Heba Allah Mohamed Abu Bakr
Hashim

has successfully completed

Data Mining Pipeline

an online non-credit course authorized by University of Colorado Boulder and offered
through Coursera

A handwritten signature in black ink, appearing to read 'Qin Lv'.

Qin Lv
Associate Professor
Computer Science
University of Colorado Boulder

COURSE
CERTIFICATE



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