



This is to certify that

James Ortiz

successfully completed and received a passing grade in

Spark Fundamentals I

(BD0211EN, provided by BigDataUniversity)

A course on **cognitiveclass.ai**

Powered by IBM Developer Skills Network.

Issued by
Cognitive Class

November 21, 2021

Authenticity of this certificate can be validated by going to:

<https://courses.cognitiveclass.ai/certificates/5cc406f628df4b71af0600f37ff80305>

Certificate ID Number: 5cc406f628df4b71af0600f37ff80305

November 21, 2021