

# Verified Certificate



This is to certify that

**Xavier Borja**

successfully completed and received a passing grade in

## **BD0231EN: Apache Spark for Data Engineering and Machine Learning**

a course of study offered by IBM, an online learning  
initiative of IBM.

**Romeo Kienzler**  
Chief Data Scientist  
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Software Engineer (Machine Learning)  
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**Verified Certificate**  
Issued August 14, 2023

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