



Anthony D. Joseph

Professor in Electrical Engineering and Computer Science

University of California, Berkeley

This is to certify that

## Yi Fan

successfully completed and received a passing grade in

## CS110x: Big Data Analysis with Apache Spark

a course of study offered by BerkeleyX, an online learning initiative of University of California, Berkeley through edX.

Diana Wu

Executive Director, Berkeley Resource Center for Online Education

University of California, Berkeley

