

# Certificate of Completion

1279

WITH HONORS

Mikhail  
Novikov

HAS  
DEMONSTRATED  
EXCEPTIONAL  
DEDICATION  
TO MASTERING  
THE SCIENCE AND  
TECHNOLOGY  
OF BIG DATA

LINUX

PYTHON

MAPREDUCE

PANDAS

TOPIC  
MODELING

CLUSTERING

HDFS

YARN

DMP

BAG  
OF WORDS

COLLABO-  
RATIVE  
FILTERING

APACHE  
SPARK

HBASE

HIVE

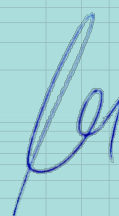
MACHINE  
LEARNING

TEXT MINING

WORD2VEC

MATRIX  
FACTORIZATION

ELENA TRETYAKOVA  
Director, New Professions Lab



December  
19, 2020

NEW  
PRO  
LAB