



13 Courses

- Introduction to Data Engineering**
- Python for Data Science, AI & Development**
- Python Project for Data Engineering**
- Introduction to Relational Databases (RDBMS)**
- Databases and SQL for Data Science with Python**
- Hands-on Introduction to Linux Commands and Shell Scripting**
- Relational Database Administration (DBA)**
- ETL and Data Pipelines with Shell, Airflow and Kafka**
- Getting Started with Data Warehousing and BI Analytics**
- Introduction to NoSQL Databases**
- Introduction to Big Data with Spark and Hadoop**
- Data Engineering and Machine Learning using Spark**
- Data Engineering Capstone Project**

Oct 30, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed the online, non-credit Professional Certificate

IBM Data Engineering

In this Professional Certificate, learners developed essential knowledge and skills to perform the many tasks in an entry-level data engineering role. By completing over a dozen courses in the program, the earner of this Professional Certificate has demonstrated a firm grasp on and practical experience with fundamentals of Relational Databases, Database Architecture, Design, & Administration, Data Warehousing, Querying databases with SQL and BI Tools, ETL with Python Programming language and Shell Scripts, NoSQL, and Big Data processing using Apache Spark. Learners have applied all these skills to complete a Capstone Project involving the design, deployment and management of a complete data engineering platform inspired by a real-world data analytics requirements scenario.

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.



A handwritten signature in black ink that reads "Rav Ahuja".

Rav Ahuja, Program Director, IBM Skills Network

Verify this certificate at:

<https://coursera.org/verify/profession-al-cert/KY2BNQURML8A>



7 Courses

Introduction to Data Engineering

Introduction to Relational Databases (RDBMS)

Databases and SQL for Data Science with Python

Hands-on Introduction to Linux Commands and Shell Scripting

Relational Database Administration (DBA)

ETL and Data Pipelines with Shell, Airflow and Kafka

Getting Started with Data Warehousing and BI Analytics



Oct 9, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed the online, non-credit Professional Certificate

Rav Ahuja,
Global Program
Director,
IBM Skills Network

IBM Data Warehouse Engineer

In this program, learners developed and honed the essential skills for designing, loading, managing and querying relational databases and data warehouses. Completers of this Certificate should be able to: Compose various types of SQL statements and queries to access and manipulate data in databases; Deploy, Secure, Operationalize, Monitor and Optimize relational database systems like MySQL, PostgreSQL, and DB2; Build Data Pipelines to extract, transform and load data repositories using shell scripts, and tools such as Apache Airflow & Kafka; Design and populate Data Warehouses and analyze their data with Business Intelligence (BI) tools like Cognos Analytics. The certificate holder should now be ready to take on the challenges of an entry-level role in Data Warehouse Engineering.

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Verify this certificate at:

<https://coursera.org/verify/profession-al-cert/Z4RCKTGT9HRC>



3 Courses

Introduction to NoSQL Databases

Introduction to Big Data with Spark and Hadoop

Data Engineering and Machine Learning using Spark



Oct 27, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed the online, non-credit Specialization

NoSQL, Big Data, and Spark Foundations

The earner of this certificate has demonstrated mastery of fundamental NoSQL and Big Data skills. This includes working with NoSQL databases- MongoDB, IBM Cloudant, & Apache Cassandra - to perform tasks like CRUD operations. As well as foundational knowledge of Big Data tools & ecosystem including Apache Hadoop, Apache Hive, HDFS, MapReduce, Apache Spark, Spark SQL, Spark Structured Streaming, Spark ML, scaling Spark with Kubernetes, and Monitoring and Performance Tuning Spark jobs. This program focused on developing hands-on practical skills and culminated with a project involving ETL processing and Machine Learning model deployment using Spark. The learner is now proficient with the skills and knowledge for essential big data management tasks and challenges requiring NoSQL and Spark.

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Romeo Kienzler
Chief Data Scientist
IBM Watson IoT

Rav Ahuja
Global Program Director,
Skills Network

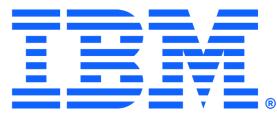
Steve Ryan
Instructional Designer &
Content Developer
Skill-Up Technologies

Aije Egwaikhide
Senior Data Scientist
IBM

Ramesh Sannareddy
Data Engineering
Subject Matter Expert
Skill-up Technologies

Karthik Muthuraman
Software Engineer
(Machine Learning)
IBM Center for Open-Source Data and AI Technologies

Verify this certificate at:
<https://coursera.org/verify/specialization/5AE395WQLMJ6>



Oct 30, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Data Engineering Capstone Project

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Rav Ahuja
Global Program Director,
Skills Network

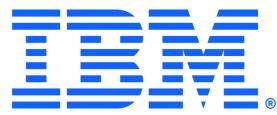
Ramesh Sannareddy
Data Engineering Subject Matter Expert
Skill-up Technologies

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/ZEYWMCJ5VC2C>

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



Oct 27, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

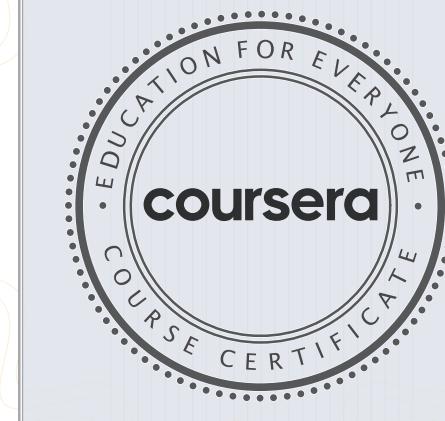
Data Engineering and Machine Learning using
Spark

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Karthik Muthuraman
Software Engineer (Machine Learning)
IBM Center for Open-Source Data and AI Technologies

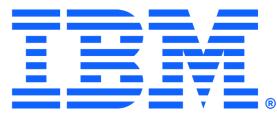
Romeo Kienzler
Chief Data Scientist
IBM Watson IoT

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/Y6PSU7R2ZMH>

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



Oct 22, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Introduction to Big Data with Spark and Hadoop

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Karthik Muthuraman
Software Engineer (Machine Learning)
IBM Center for Open-Source Data and AI Technologies

Aije Egwaikhede
Senior Data Scientist
IBM

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/RWD R3VYD67HX>

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



Oct 17, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Introduction to NoSQL Databases

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Rav Ahuja

Rav Ahuja, Global Program Director, Skills Network

Ramesh Sannareddy, Data Engineering Subject Matter Expert, Skill-Up Technologies

Steve Ryan, Instructional Designer & Content Developer, Skill-Up Technologies

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/V5MGS62ZPWXC>

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



Oct 4, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

ETL and Data Pipelines with Shell, Airflow and
Kafka

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Yan Luo Ramesh Sannareddy S. Spillner Jeff Grossman

Yan Luo, Ramesh Sannareddy
Sabrina Spillner, Jeff Grossman

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/VCGBZV7ZZUTX>

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



Sep 4, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Databases and SQL for Data Science with Python

an online non-credit course authorized by IBM Skills Network and offered through Coursera

Rav Ahuja
Global Program Director,
Skills Network

Hima Vasudevan
IBM

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/M3VZ4CGEE4BA>

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



Sep 22, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Data Visualization and Communication with
Tableau

an online non-credit course authorized by Duke University and offered through Coursera

A handwritten signature in black ink, appearing to read "Daniel Egger".

Daniel Egger
Executive in Residence and Director,
Center for Quantitative Modeling
Pratt School of Engineering

A handwritten signature in black ink, appearing to read "Dr. Jana Schaich Borg".

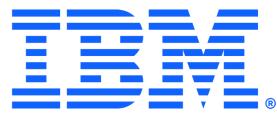
Jana Schaich Borg
Assistant Research Professor
Social Science Research Institute

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/LDSCS5BLKVS6>

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



Oct 9, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Getting Started with Data Warehousing and BI Analytics

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Ramesh Sannareddy

Ramesh Sannareddy
Data Engineering Subject Matter Expert
Skill-up Technologies

Rav Ahuja

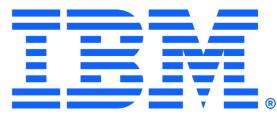
Rav Ahuja
Global Program Director,
Skills Network

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/YER653UGYKCN>

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



Sep 8, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Hands-on Introduction to Linux Commands and Shell Scripting

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Ramesh Sannareddy 

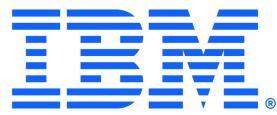
Rav Ahuja, Ramesh Sannareddy, Sam Prokopchuk
IBM Skills Network

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/C8R5GGAVBTUS>

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



Aug 18, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Introduction to Data Analytics

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

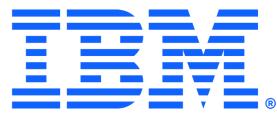
Rav Ahuja
Global Program Director,
Skills Network

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/48XW4SMGVEDV>

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



Aug 23, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Introduction to Data Engineering

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Rav Ahuja
Global Program Director,
Skills Network

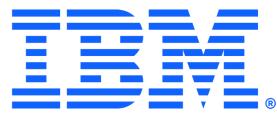
Priya Kapoor
Senior Instructional Designer & Content Developer
Skill-up Technologies

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/H6F6CVFU827H>

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



Aug 29, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Introduction to Relational Databases (RDBMS)

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Lin Joyner, Rav Ahuja, Rose Malcolm, Sandip Saha Joy

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/BTGAHZRLJGEU>

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



Aug 26, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Python for Data Science, AI & Development

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

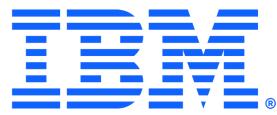
Joseph Santarcangelo
Senior Data Scientist
IBM

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/NYCLZ62NWVR9>

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



Aug 27, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Python Project for Data Engineering

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Ramesh Sannareddy J Santarcangelo

Ramesh Sannareddy
Data Engineering Subject Matter Expert
Skill-up Technologies

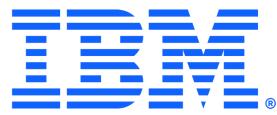
Joseph Santarcangelo
Senior Data Scientist
IBM

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/ZTR9JBRMCUQB>

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



Sep 28, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Relational Database Administration (DBA)

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Ramesh Sannareddy

Ramesh Sannareddy
Data Engineering Subject Matter Expert
Skill-up Technologies

Rav Ahuja

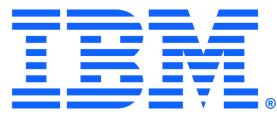
Rav Ahuja
Global Program Director,
Skills Network

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/HSYGC6BL26PR>

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



Sep 7, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Data Science Methodology

an online non-credit course authorized by IBM Skills Network and offered through
Coursera

Alex Aklson, Ph.D.
Data Scientist

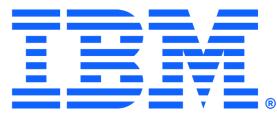
Polong Lin
Data Scientist, IBM

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/B28ZE2FWR487>

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



Sep 6, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

Tools for Data Science

an online non-credit course authorized by IBM Skills Network and offered through
Coursera



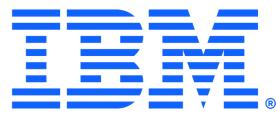
Maureen McElaney
Romeo Kienzler
Svetlana Levitan

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/UAVWKG3GWVLG>

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



Aug 31, 2022

Seyed Mohammad Hashem Zadeh

has successfully completed

What is Data Science?

an online non-credit course authorized by IBM Skills Network and offered through Coursera

Rav Ahuja
Global Program Director,
Skills Network

Alex Aklson, Ph.D.
Data Scientist

COURSE CERTIFICATE



Verify at:
<https://coursera.org/verify/JCLYZ3HNPHR5>

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