

“Learning is the source of human progress.

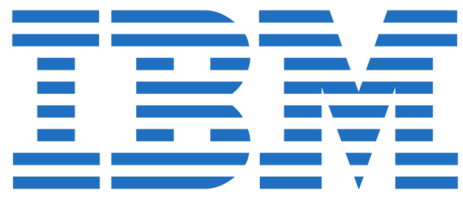
It has the power to transform our world from illness to health, from poverty to prosperity, from conflict to peace. It has the power to transform our lives for ourselves, for our families, for our communities. No matter who we are or where we are, learning empowers us to change and grow and redefine what’s possible. That’s why access to the best learning is a right, not a privilege.

Learning by doing. Learning without limits.”



**Professional-Level
Trained in
E2E Data Science**





IBM Data Engineering Professional Certificate (V2)



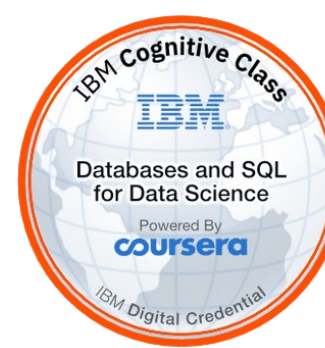
Professional V2



Business Intelligence and Data Warehousing Specialization

Advanced

Big Data, NoSQL, and Spark Foundations Specialization V2



Data Engineering Foundations

Verify each IBM Digital Credentials thru Credly-Acclaim by clicking each badge.



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

Machine Learning with Apache Spark

Data Engineering Capstone Project



Oct 19, 2023

Erwin Pasia

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.

Rav Ahuja, Program
Director, IBM Skills
Network

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/professional-cert/A4HMGX88ZNSB>



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



Jun 11, 2023

Erwin Pasia

has successfully completed the online, non-credit Professional Certificate

IBM Data Warehouse Engineer

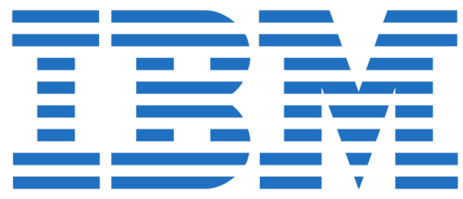
In this program, learners developed and honed the essential skills for designing, loading, managing and querying relational databases and data warehouses. Completers of this Certificate should be able to: Compose various types of SQL statements and queries to access and manipulate data in databases; 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.

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Rav Ahuja,
Global Program
Director,
IBM Skills Network

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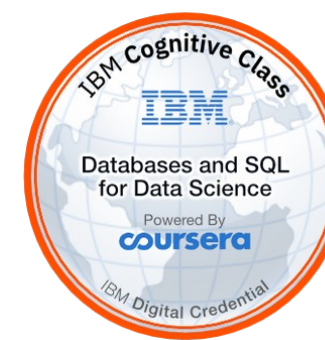
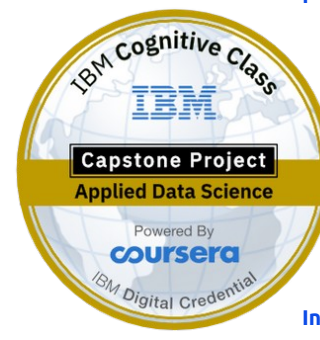
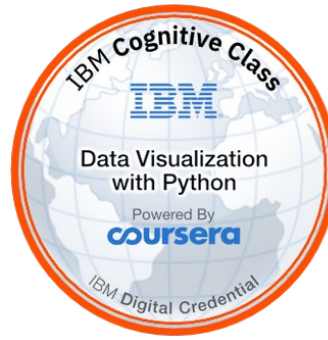
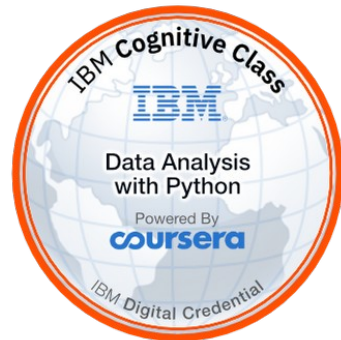
IBM Data Science Professional Certificate (V2)



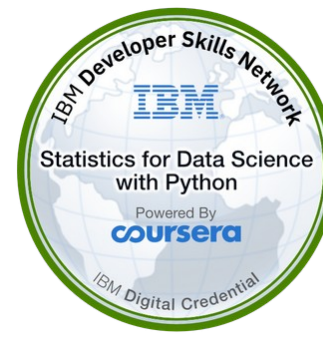
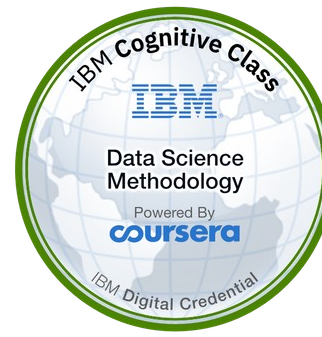
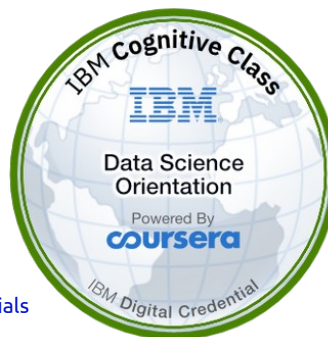
Professional



Specialization



Intermediate



Foundational



10 Courses

What is Data Science?

Tools for Data Science

Data Science Methodology

Python for Data Science, AI & Development

Python Project for Data Science

Databases and SQL for Data Science with Python

Data Analysis with Python

Data Visualization with Python

Machine Learning with Python

Applied Data Science Capstone



Jan 23, 2023

Erwin Pasia

has successfully completed the online, non-credit Professional Certificate

IBM Data Science

In this Professional Certificate, learners developed and honed hands-on skills in Data Science and Machine Learning. Learners started with an orientation of Data Science and its Methodology, became familiar and used a variety of data science tools, learned Python and SQL, performed Data Visualization and Analysis, and created Machine Learning models. In the process they completed several labs and assignments on the cloud including a Capstone Project at the end to apply and demonstrate their knowledge and skills.

Rav Ahuja
AI & Data Science
Program Director
IBM Skills Network

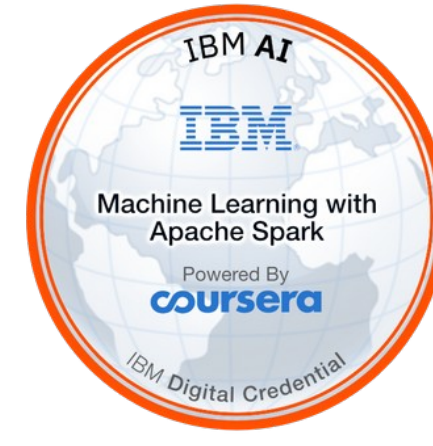
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Verify this certificate at:

<https://coursera.org/verify/professional-cert/3F62TM7PSHP2>



IBM AI Engineering Professional Certificate (V2)



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Optional Course.
Only available in version 1.



6 Courses

Machine Learning with Python

Introduction to Deep Learning & Neural Networks with Keras

Introduction to Computer Vision and Image Processing

Deep Neural Networks with PyTorch

Building Deep Learning Models with TensorFlow

AI Capstone Project with Deep Learning



May 10, 2023

Erwin Pasia

has successfully completed the online, non-credit Professional Certificate

IBM AI Engineering

Learners who have completed this 6 course Professional Certificate have a practical understanding of Machine Learning (ML) & Deep Learning (DL). They have technical skills to start a career in AI Engineering, and can:

- Implement ML algorithms including Classification, Regression, Clustering, and Dimensional Reduction using scipy & scikitlearn
- Perform ML on Big Data and deploy ML Algorithms and Pipelines on Apache Spark
- Demonstrate understanding of Deep Learning models such as autoencoders, restricted Boltzmann machines, convolutional networks, recursive neural networks, and recurrent networks
- Build deep learning models and neural networks using Keras, PyTorch and Tensorflow libraries
- Demonstrate ability to present and communicate outcomes of deep learning projects

Rav Ahuja
AI & Data Science
Program Director
IBM Skills Network

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watsonx.ai

IBM Generative AI For Data Scientists Specialization



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3 Courses

Generative AI: Introduction and Applications

Generative AI: Prompt Engineering Basics

Generative AI: Elevate Your Data Science Career



Feb 9, 2024

Erwin Pasia

has successfully completed the online, non-credit Specialization

Generative AI for Data Scientists

By completing this specialization, the learner has demonstrated the ability to differentiate generative AI from discriminative AI, describe real-world generative uses, and identify and use popular generative AI models and tools for text, code, image, audio, and video generation. The learner can explain generative AI prompt engineering concepts, provide examples, and apply prompt engineering techniques that create demonstrably useful outcomes. The learner can identify useful, appropriate generative AI tools for data science and apply generative AI prompt techniques to tasks throughout the data methodology process including data set generation data set augmentation, and machine learning model development and refinement, visualizations, and insights.

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Rav Ahuja
Global Program
Director,
Skills Network

Antonio Cangiano
Engineering Manager
and AI Specialist
IBM Digital Business
Group

Abhishek Gagneja
Python and AI Subject
Matter Expert

Dr. Pooja
Instructor and Subject
Matter Expert
Skill-Up Technologies

Verify this certificate at:

<https://coursera.org/verify/specialization/TKAMSMW2BXBQ>