

## Module 3 Summary

Congratulations! You have completed this module. At this point in the course, you know that:

- Python offers a diverse library ecosystem for data science, covering scientific computing (Pandas, NumPy), visualization (Matplotlib, Seaborn), and high-level machine learning (Scikit-learn). These libraries offer tools for data manipulation, mathematical operations, and simplified machine learning model development.
- Application Programming Interfaces (APIs) facilitate communication between software components. REST APIs, specifically, facilitate internet communication and access resources like storage. Key API terms include client (user or code accessing it), resource (service or data), and endpoint (API's URL).
- Machine learning models analyze data and identify patterns to make predictions and automate complex tasks—the three fundamental types of machine learning are supervised, unsupervised, and reinforcement learning. Supervised learning includes regression and classification models for predictive modeling and pattern recognition. Deep learning, an advanced subset of machine learning, mimics the brain's processing, enabling intricate problem-solving in various domains.
- The Community Data License Agreement (CDLA) facilitates open data sharing by providing clear licensing terms for distribution and use, and the IBM Data Asset eXchange (DAX) site contains high-quality open data sets.
- The Model Asset eXchange (MAX) provides a wealth of pre-trained deep learning models, empowering developers with readily deployable solutions for various business challenges.

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