Since deep learning and machine learning tend to be used interchangeably, it's worth noting the nuances between the two. Machine learning, deep learning, and neural networks are all sub-fields of artificial intelligence. However, neural networks is actually a sub-field of machine learning, and deep learning is a sub-field of neural networks.

The way in which deep learning and machine learning differ is in how each algorithm learns. "Deep" machine learning can use labeled datasets, also known as supervised learning, to inform its algorithm, but it doesn't necessarily require a labeled dataset. The deep learning process can ingest unstructured data in its raw form (e.g., text or images), and it can automatically determine the set of features which distinguish different categories of data from one another. This eliminates some of the human intervention required and enables the use of large amounts of data. You can think of deep learning as "scalable machine learning" as Lex Fridman notes in [this MIT lecture](#) (link resides outside ibm.com).

Classical, or "non-deep," machine learning is more dependent on human intervention to learn. Human experts determine the set of features to understand the differences between data inputs, usually requiring more structured data to learn.