

Introduction to Machine Learning

An increasing amount of data is captured around health, from biological to genomic data, and from lifestyle to clinical trial data. Machine learning is a subfield of artificial intelligence, that allows us to harness the power of such data. Machine learning algorithms allow computers to identify patterns in data, build models that explain the world, and make predictions without having explicit pre-programmed rules and models. Machine learning is revolutionizing the life sciences, allowing us to answer important questions such as, what is the level of risk of a heart attack for this patient? Or what are the different groups of HIV patients that responded positively to the new treatment? Apart from answering questions, machine learning also enables us to raise new questions of great significance. For instance, should we consider any new biomarkers for a particular condition? By raising and answering such questions, machine learning serves as a catalyst for precision medicine. In the next videos, we'll learn about different types of machine learning algorithms and we'll discover how they're impacting biomedicine and healthcare.