

# An Introduction to Artificial Intelligence

The term Artificial Intelligence (“AI”) may bring to mind images of robots and drones, but AI isn’t a futuristic idea – it’s already part of our daily lives. Netflix (NFLX) uses AI to recommend movies and TV shows that you’re likely going to enjoy. Amazon (AMZN) uses AI to recommend items similar to those you’ve shown interest in. And, Alphabet (GOOGL), the parent company of Google, uses AI to gather information on your consumer preferences and offer advertisements targeted to your needs.

Simply put, AI is an area of computer science which aims to replicate human actions and rational thought in order to achieve a goal. This includes continuous data collection and interpretation in order to perform increasingly complex tasks. These tasks go far beyond what a human can accurately perform.

## Industries advancing with AI

Many different industries, from agriculture to insurance, leverage the use of AI to increase their productivity and gain competitive advantages. The following are some ways that industries are using AI to their advantage.

**Finance:** The use of AI, machine learning and big data is already prevalent in the world of finance. Portfolio Managers are leveraging the technology to identify trends, predict earnings, and time market pullbacks. Some Portfolio Managers and Investment Managers use AI to shape the most optimal investment strategy and risk management processes on behalf of their clients. AI programs scanning social media posts, emails, and questionnaires can determine an individual’s risk tolerance and identify companies that align with their values. Additionally, AI is helping individuals with their personal finances, ensuring they stay on track with their savings objectives and encouraging responsible spending patterns.

**Insurance:** The use of AI and machine learning presents a massive disruption for both insurance companies and those who seek insurance. Companies like Progressive (PGR) offer discounts for those who put chips in their vehicles in order

to monitor acceleration, braking intensity, speed, and abrupt maneuvering. By using the input data, these programs help companies understand the relative level of safety associated with the driver, and therefore reduce their insurance plan costs, if appropriate. Over the long-term, the rise in self-driving cars may eventually cut down the need for collision insurance.

**Healthcare:** The use of AI and machine learning has entirely transformed some aspects of modern medicine. Robotics powered by AI are used to conduct surgeries, scanning hardware and systems are used to diagnose deadly diseases, and larger databases of information are used to help physicians make more informed diagnoses. For example, by observing the sequencing of individual genomes and then comparing them to a database using an AI/machine learning program, a doctor will be able to know the probability that the individual will contract a particular disease and anticipate the best ways to treat that disease if it appears in the future. Companies like Apple (AAPL) and Samsung (SSNLF) are investing billions in developing new biometric sensors. Data from these sensors can form big data sets, which can be combined with other data to help prevent disease and extend lifespans.

**Agriculture:** The use of machine learning to analyze massive satellite imagery data sets in order to more accurately predict crop yields can help to address global food shortages, identify lower risk agricultural areas in order to increase yields, and increase the effectiveness of hedging programs for companies which depend on purchasing or selling these raw goods. A higher crop yield results in higher profits for farmers, lower prices for consumers, and ultimately incurs higher economic productivity.



The influence of AI in our daily lives will likely continue to grow as further developments within this field are made. For more information, please speak with your BMO financial professional.



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ID1704 (02/18)