# How does AI work?
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Artificial intelligence (AI) is a broad term that encompasses a wide range of technologies and techniques, but at its core, it involves the use of algorithms and data to enable machines to perform tasks that typically require human intelligence. Here are some functions that AI technology performs that illustrate how AI works:

1. Data Collection: AI systems require large amounts of data to learn and improve their performance. This data can come from a variety of sources, such as sensors, cameras, text, and other forms of input.
2. Data Preprocessing: The collected data is cleaned, structured, and prepared for analysis. This step involves techniques such as normalization, feature engineering, and data augmentation.
3. Algorithm Selection: Based on the problem to be solved, an appropriate algorithm is selected. Different algorithms have different strengths and weaknesses and are used for different types of tasks.
4. Model Training: The algorithm is trained on the preprocessed data using a process called supervised or unsupervised learning. In supervised learning, the model is trained on labeled data, where each data point is associated with a correct output. In unsupervised learning, the model learns patterns in the data without any specific guidance.
5. Model Evaluation: The trained model is evaluated on a separate set of data to measure its accuracy and performance. The evaluation helps identify areas where the model needs improvement.
6. Model Deployment: Once the model has been trained and evaluated, it can be deployed in real-world applications. The model is integrated with other systems, such as web applications or mobile apps, to perform specific tasks.
7. Model Maintenance: AI models require ongoing maintenance to ensure they continue to perform well over time. This may involve updating the model with new data, improving the algorithm, or tweaking the parameters.

Overall, AI involves a complex set of techniques and technologies, but at its core, it relies on data and algorithms to enable machines to perform tasks that typically require human intelligence.