

MACHINE LEARNING INTRODUCTION

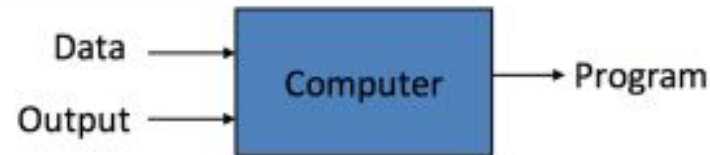
What is Machine Learning all about?

- The field of study that gives computers the capability to learn without being explicitly programmed.
- An application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed.
- The scientific study of algorithms and statistical models that computer systems use to effectively perform a specific task without using explicit instructions.

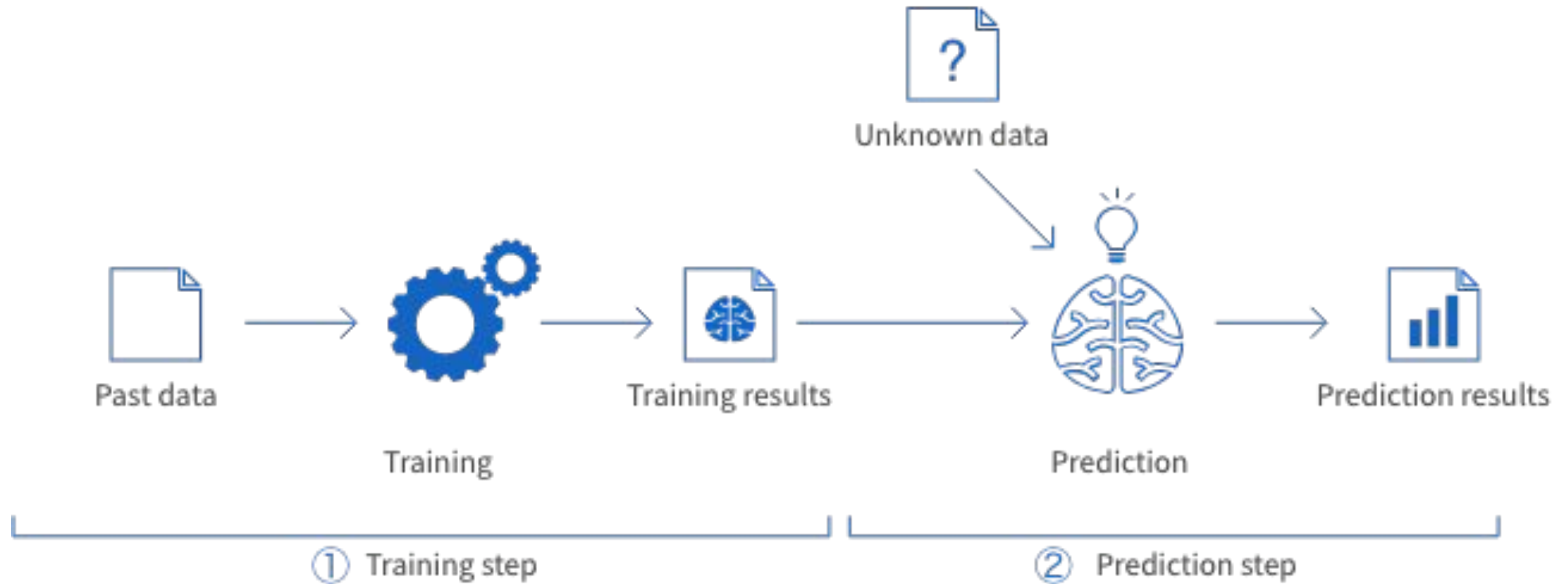
Traditional Programming



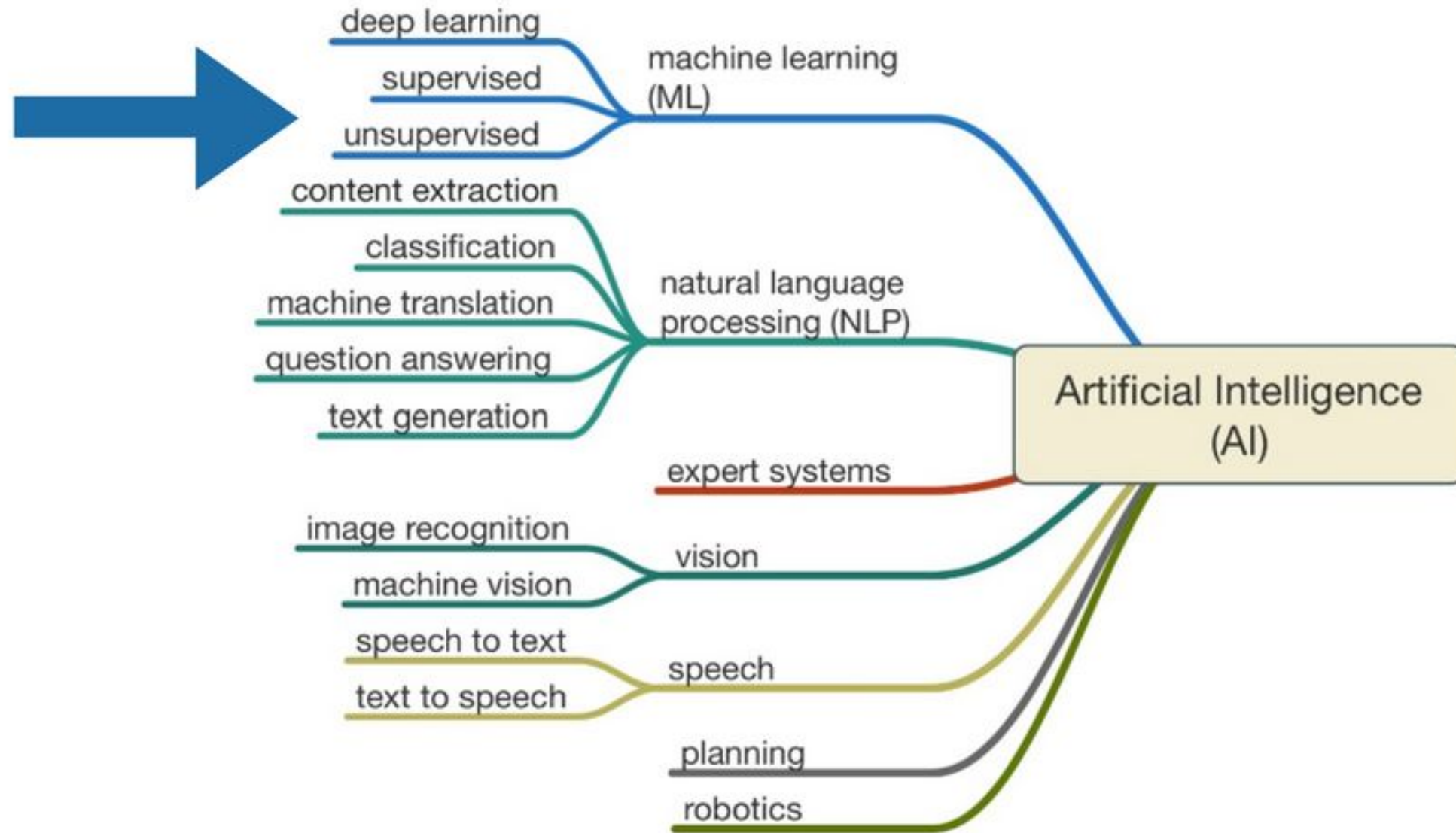
Machine Learning



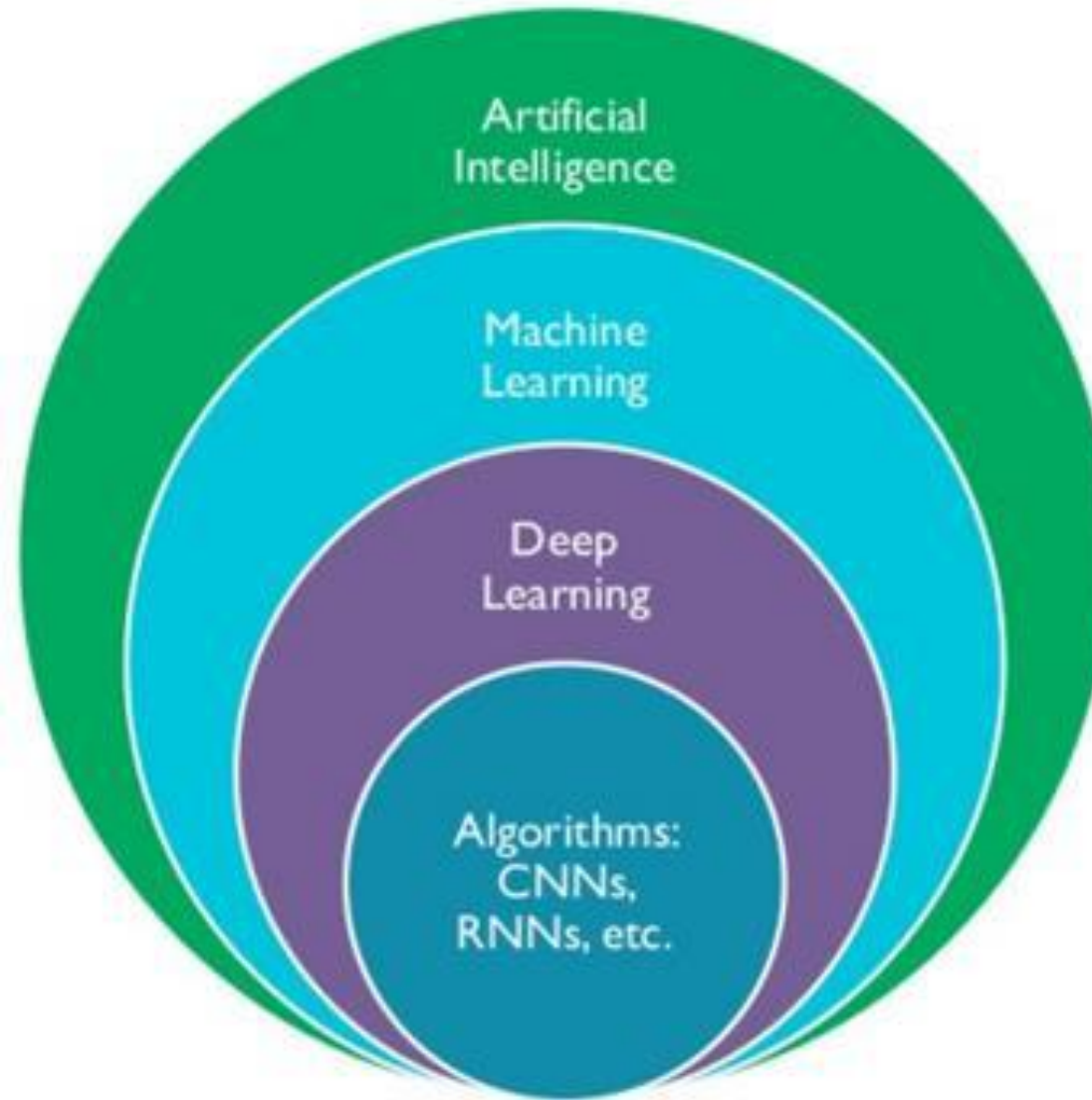
What ML does?



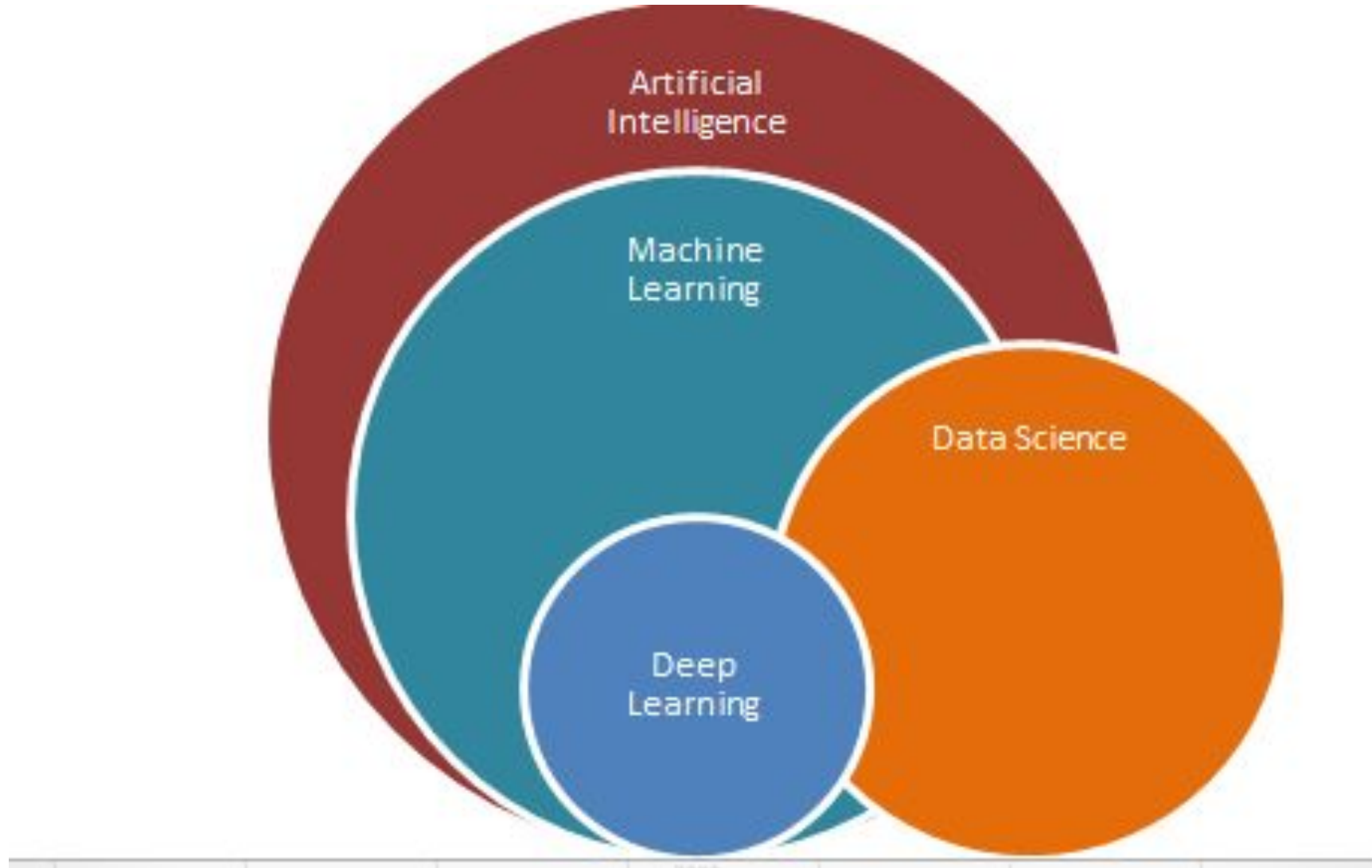
The differences / similarities between



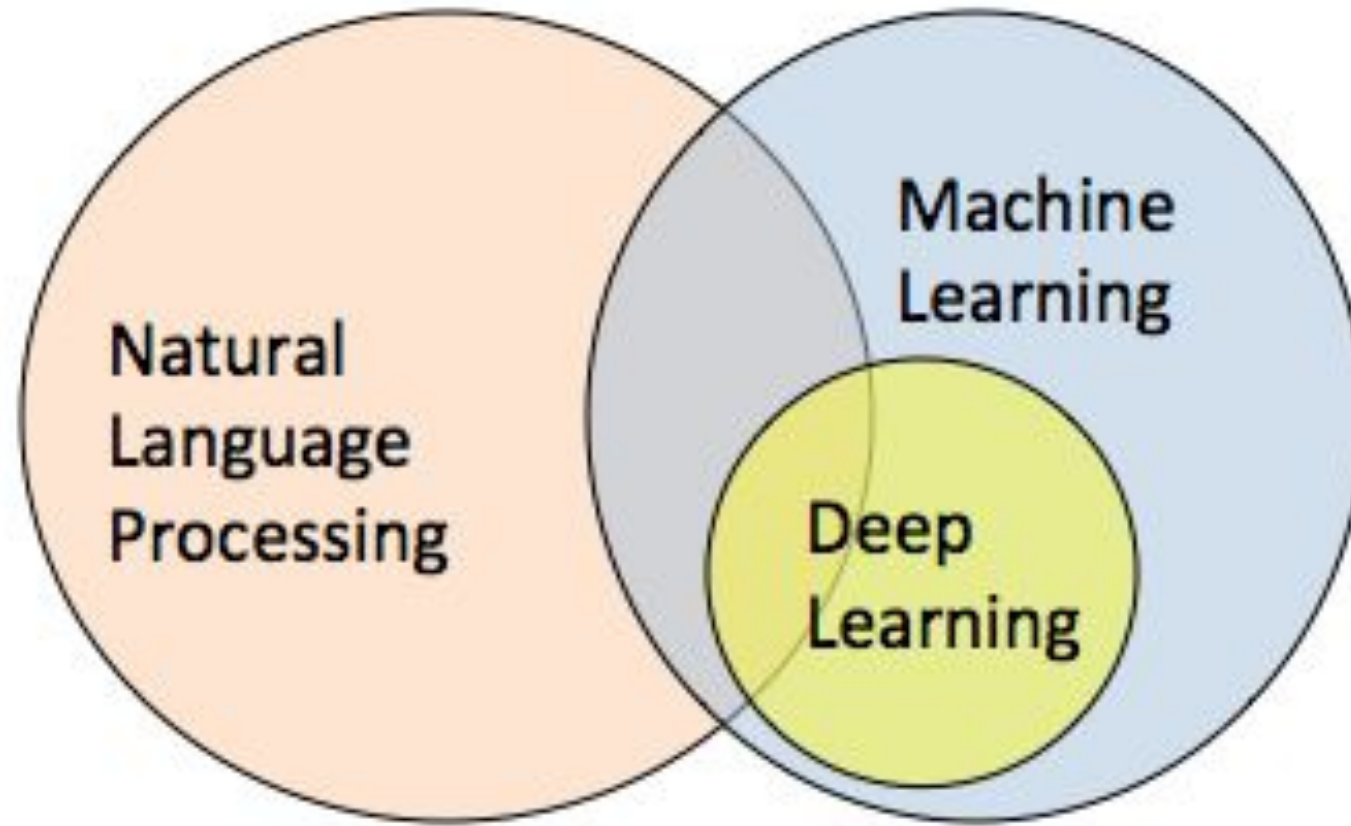
The differences / similarities between



The differences / similarities between



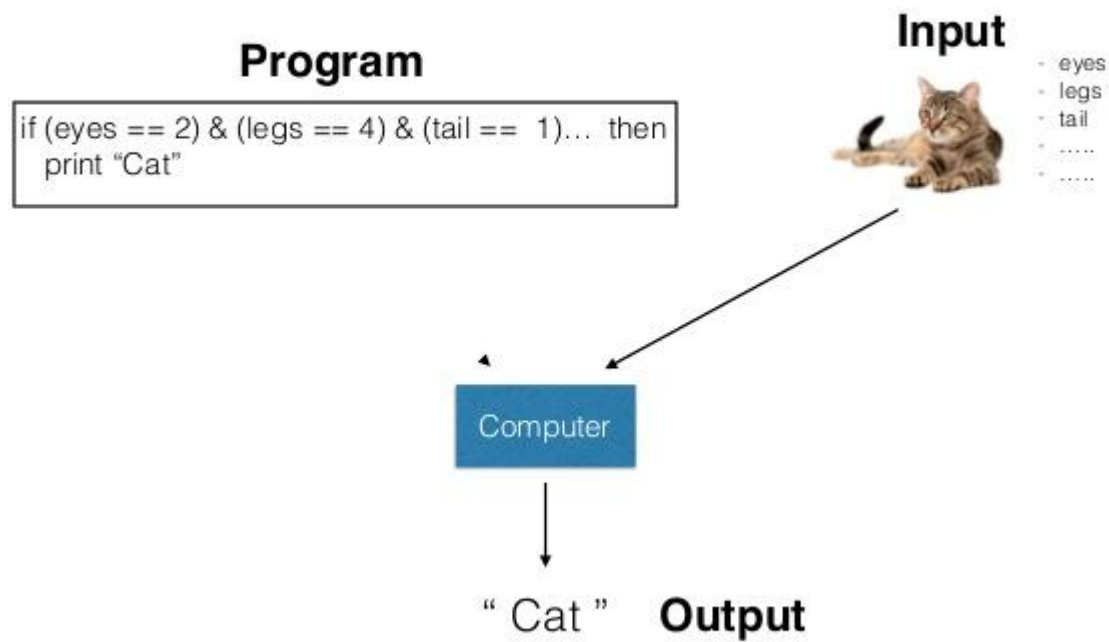
The differences / similarities between



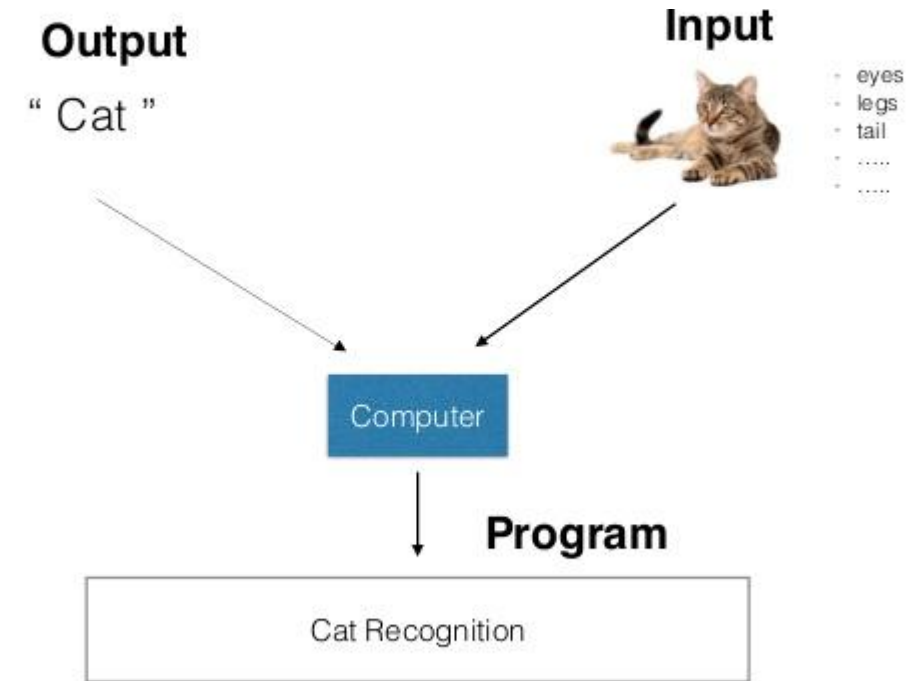
Traditional Programming vs Machine Learning



Traditional Programming vs Machine Learning



Traditional programming



Machine Learning

Use Cases of Machine Learning

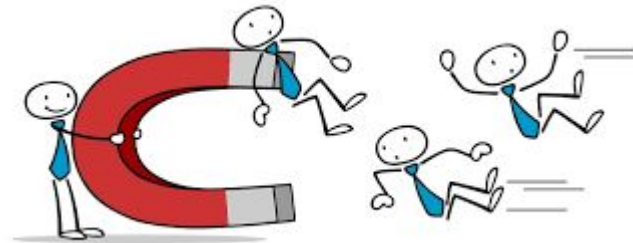
- Voice Recognition



- Generate Question Bank from Books



- Predict the employee retention



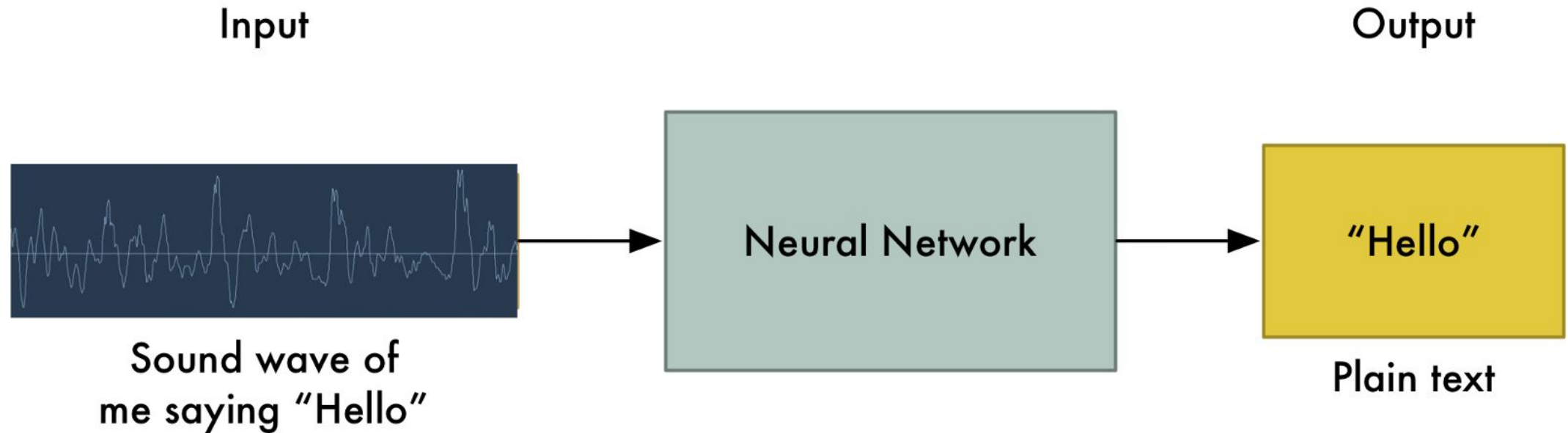
Voice Recognition



- Voice recognition is invading our lives.
- It's built into our phones, our game consoles and our smart watches.
- It's even automating our homes.

- But speech recognition has been around for decades, so why is it just now hitting the mainstream?
- The reason is that deep learning finally made speech recognition more accurate.
- Using deep learning speech recognition goes from 95% accurate to 99% accurate.

Voice Recognition



- The big problem is that speech varies in speed. One person might say “hello!” very quickly and another person might say “heeeeelllllllllllooooo!” very slowly.
- To work around this, we have to use some special tricks and extra preprocessing.

Generate Question Bank from Books

- Using machine learning, computers are made to think like humans and create questions the way human brain works to create meaningful questions out of the given context.
- Human needs to understand the context and quality of the context which computers do it automatically with algorithms.



Generate Question Bank from Books

- Problem statement:

- In the age of information overload, the key to a successful learning experience lies in asking the right questions. Professor's quality time is invested a lot in just preparing the questions.

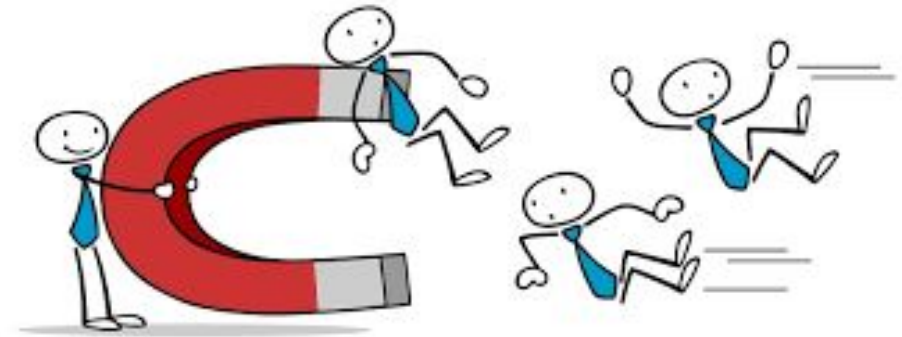
- Solution:

- As the task of question preparation is repetitive, we can use machines for the same.
- Powered by artificial intelligence and machine learning algorithms, computers can be made to think like humans and create questions the way human brain works to create meaningful questions out of the given context.



Predict the employee retention

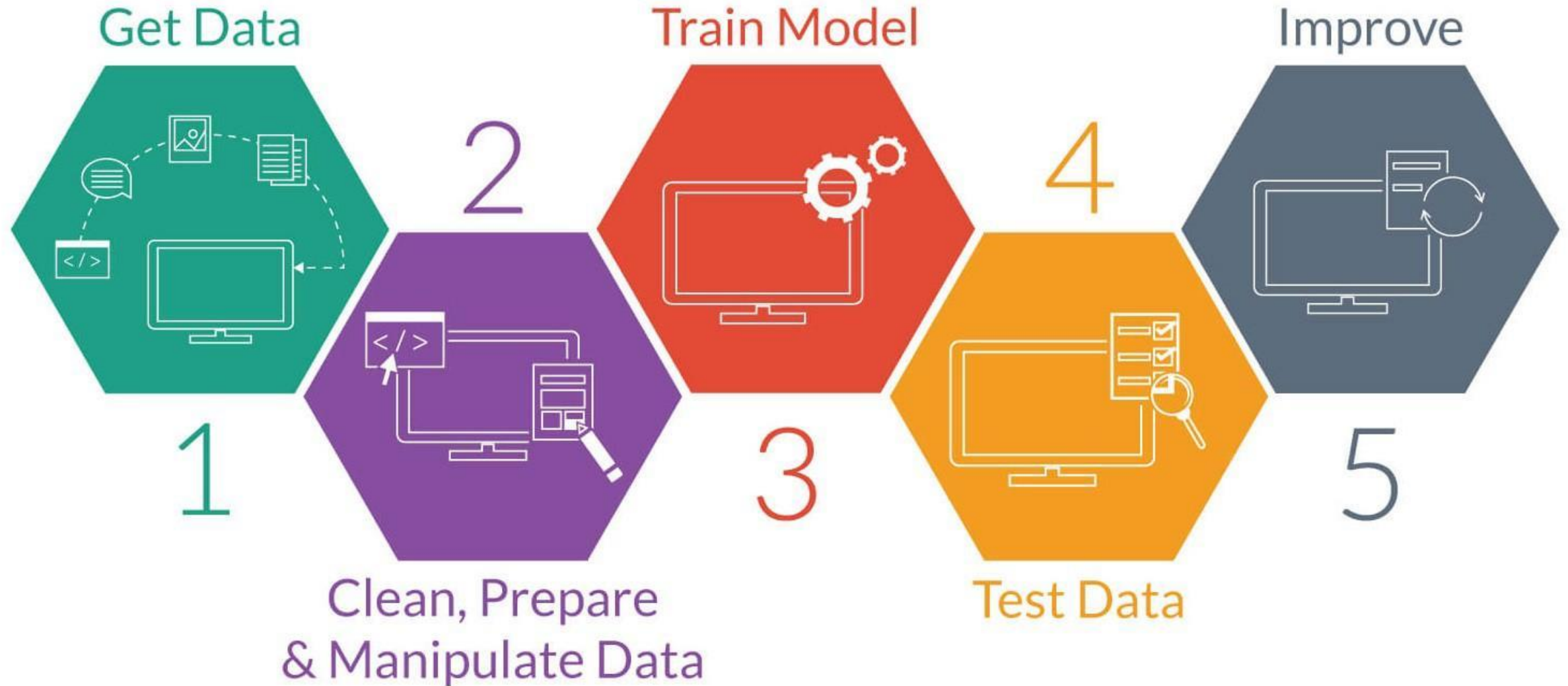
- Employees retention is biggest challenge for companies.
- If we understand the root cause of the problem, we can increase the retention ratio.
- Employee retention is based on number of factors.
- To think analytically and make decisions to work on these factors is very challenging task for humans.
- Can we somehow use AI to figure out the factors responsible for retention?



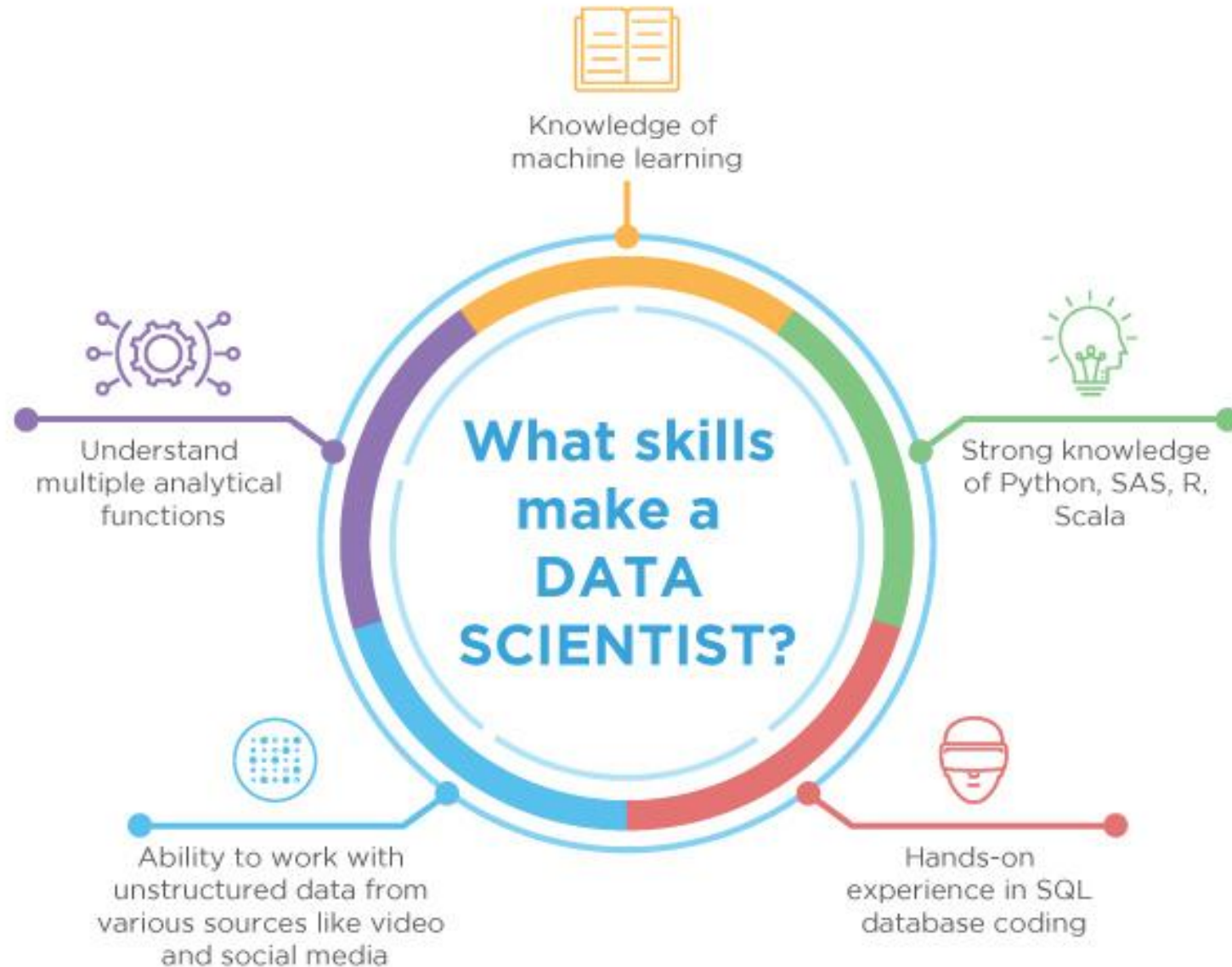
Predict the employee retention

- Obviously we can.
- Every company maintains the historical data of employees and that data can be used to predict which all employees can leave the company in near future.
- We can also use AI to figure out the factors which are responsible and how much contribution of each factor is towards it.
- We can start with predicting who might leave company in near future so that necessary arrangements can be done well in advance and then gradually improve the AI algorithm to also help us on the contribution of each factor later on.
- This can help the organization a lot and save huge time/money along with timely project deliveries.

Steps to do Machine Learning



Skills needed for Data Science



Skills needed for Machine Learning



What tools are needed for Machine Learning?





The Machine Learning Course from us

- We have the top class trainer having more than 18 years of IT experience.
- Please get it touch with the trainer on:
 - <https://www.linkedin.com/in/profileatingupta/>
- Course Name:
 - 2 Days Bootcamp on Machine Learning with Python
- Duration: 16 Hours
- Visit to Register now:
 - <http://atttrainings.com/course/bootcamp-on-machine-learning-with-python-2-days/>
-

