

AI Application Development using Python

Yuktesh Chintamadaka
Developer Advocate, IBM
@yukteshc

Agenda

- Demystifying DS, AI, ML, DL
- Traditional vs ML Programming
- Life Cycle of ML Project
- AI Applications
- Types of ML
- Supervised Learning Algorithms
- Why Python
- Cloud
- Watson Studio

DS, AI, ML, DL



Data Science

Cloud

Artificial Intelligence

Nlp

Speech

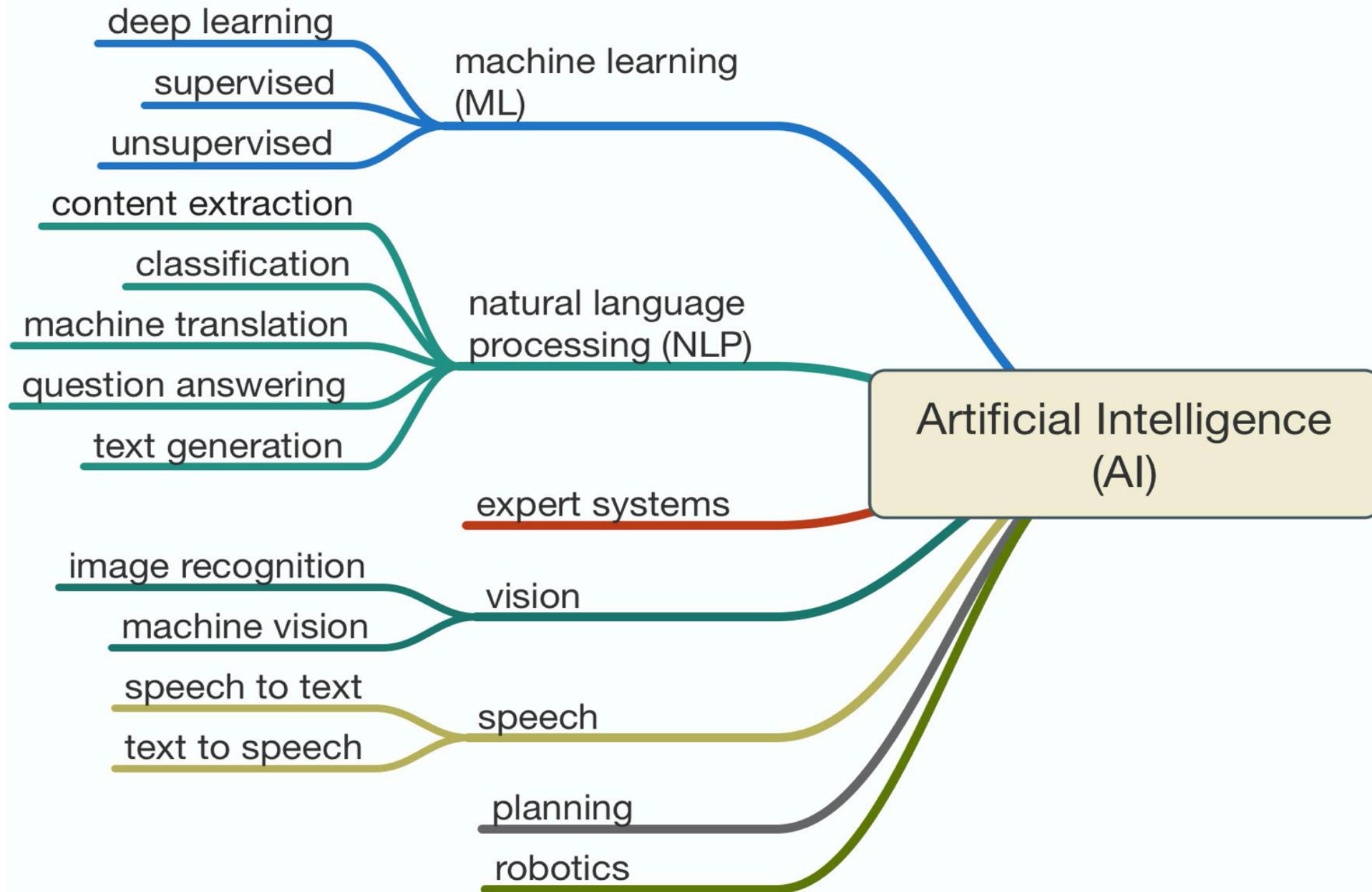
Vision

**Data
Analysis**

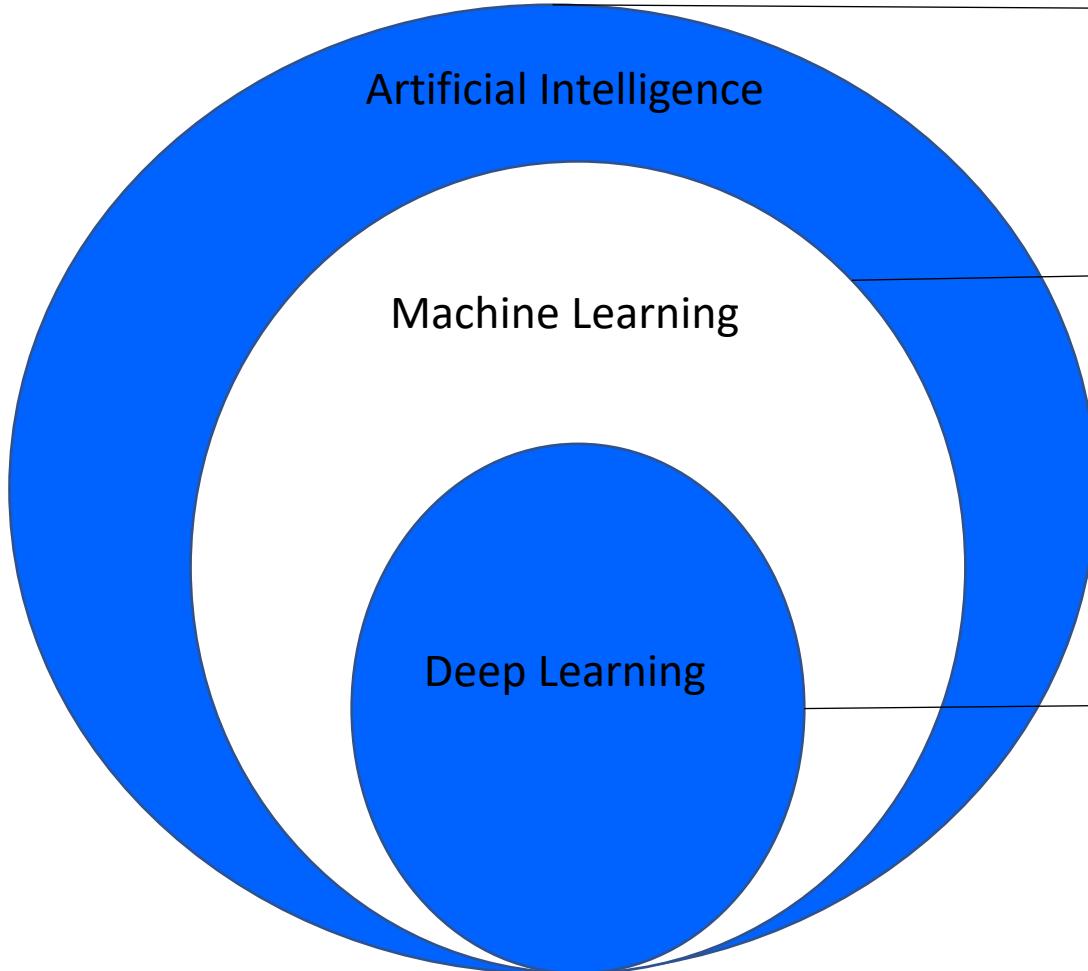
**Data
Visualization**

Machine Learning

Deep Learning



Buzzwords associated with AI



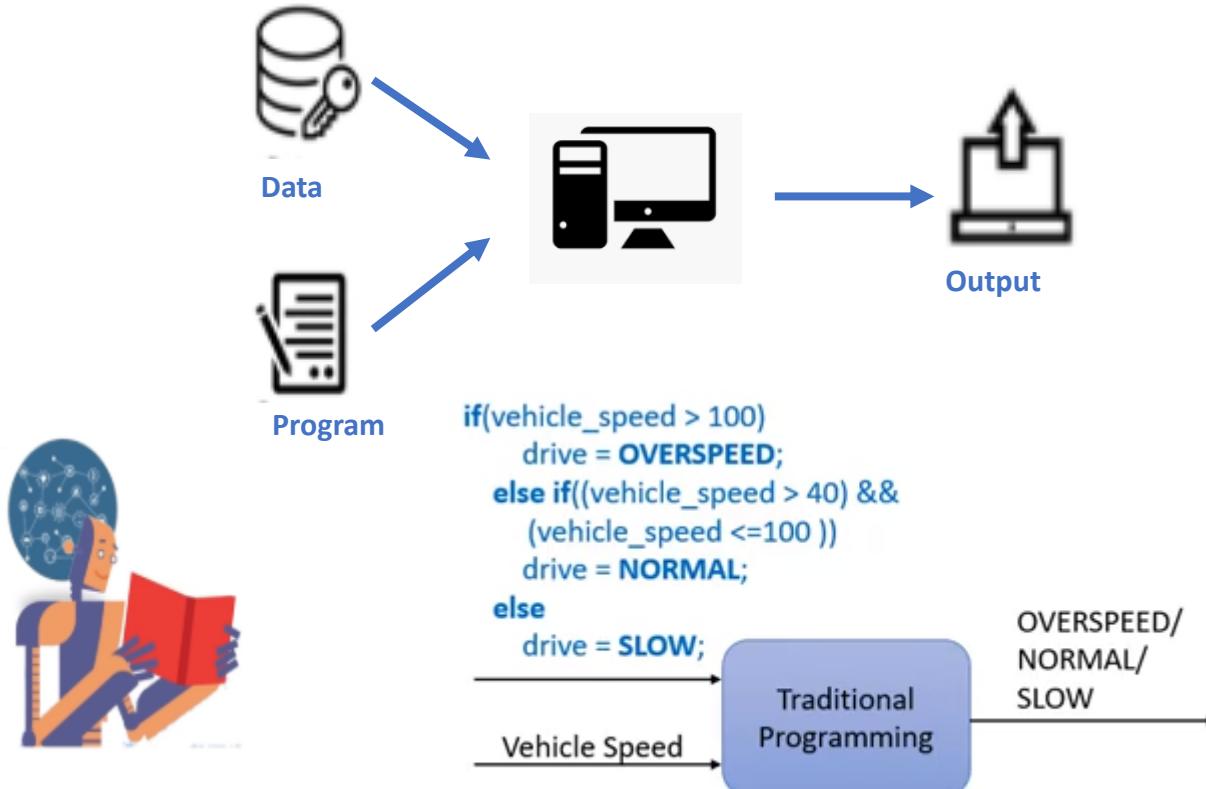
is the simulation of human intelligence by computers.

is a branch of AI where algorithms are used to learn from data to make future decisions or predictions.

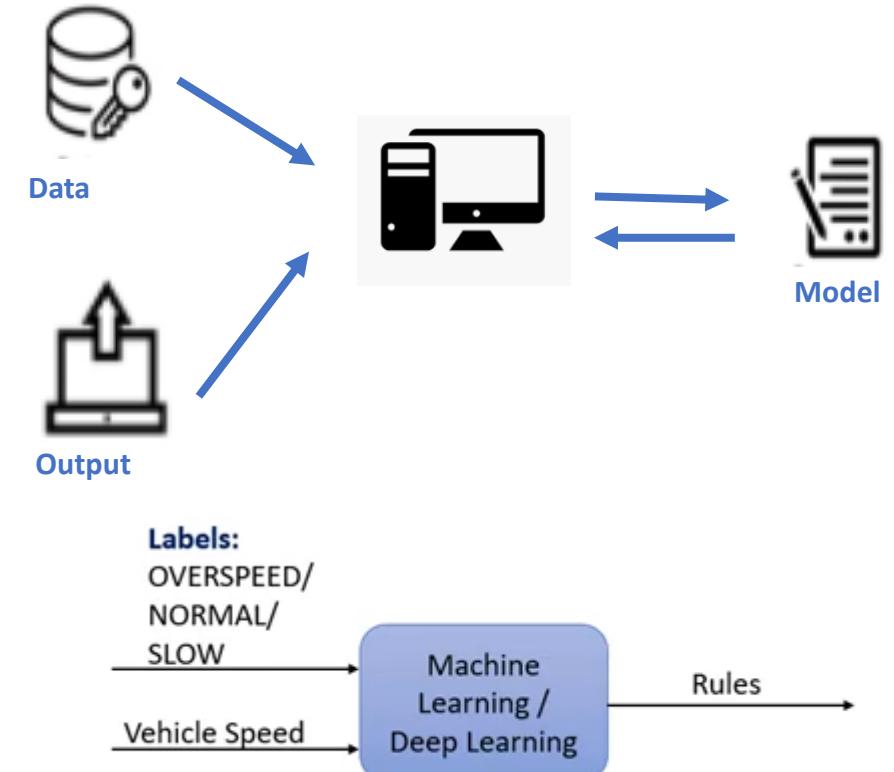
is a specific subset of machine learning using artificial neural networks (ANN) which are layered structures inspired by the human brain.

How it works

Traditional Programming



Machine Learning Programming



Machine Learning

Machine Learning is the science of getting computers to learn, without being explicitly programmed.

-Arthur Samuel

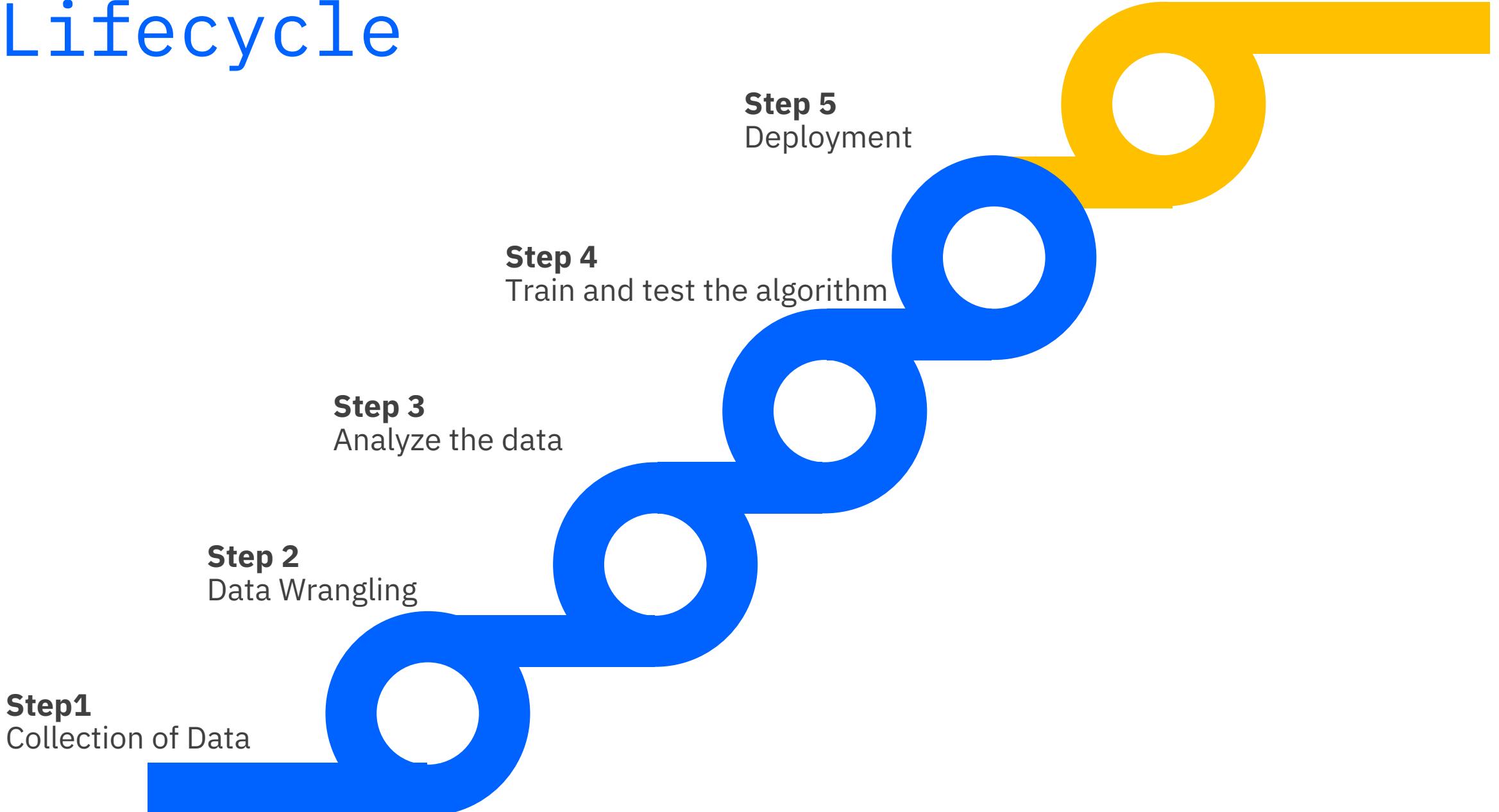


Getting Computers to program themselves and teaching them to make decision using data .

Applications of Artificial Intelligence

- Online Customer Support
- Predictions while commuting
- Social Media Services
- Email Spam Filtering
- Search Engine Result Refining
- Product Recommendation

Lifecycle



Types of Machine Learning



Makes machine learns explicitly

Data with Clearly Defined
Output is given

Predicts Futures/outcome

Resolves regression and
classification problems

Supervised Learning



Machine understands the data

Evaluation is qualitative or indirect

Does not find or predict anything

Unsupervised Learning



An approach to AI

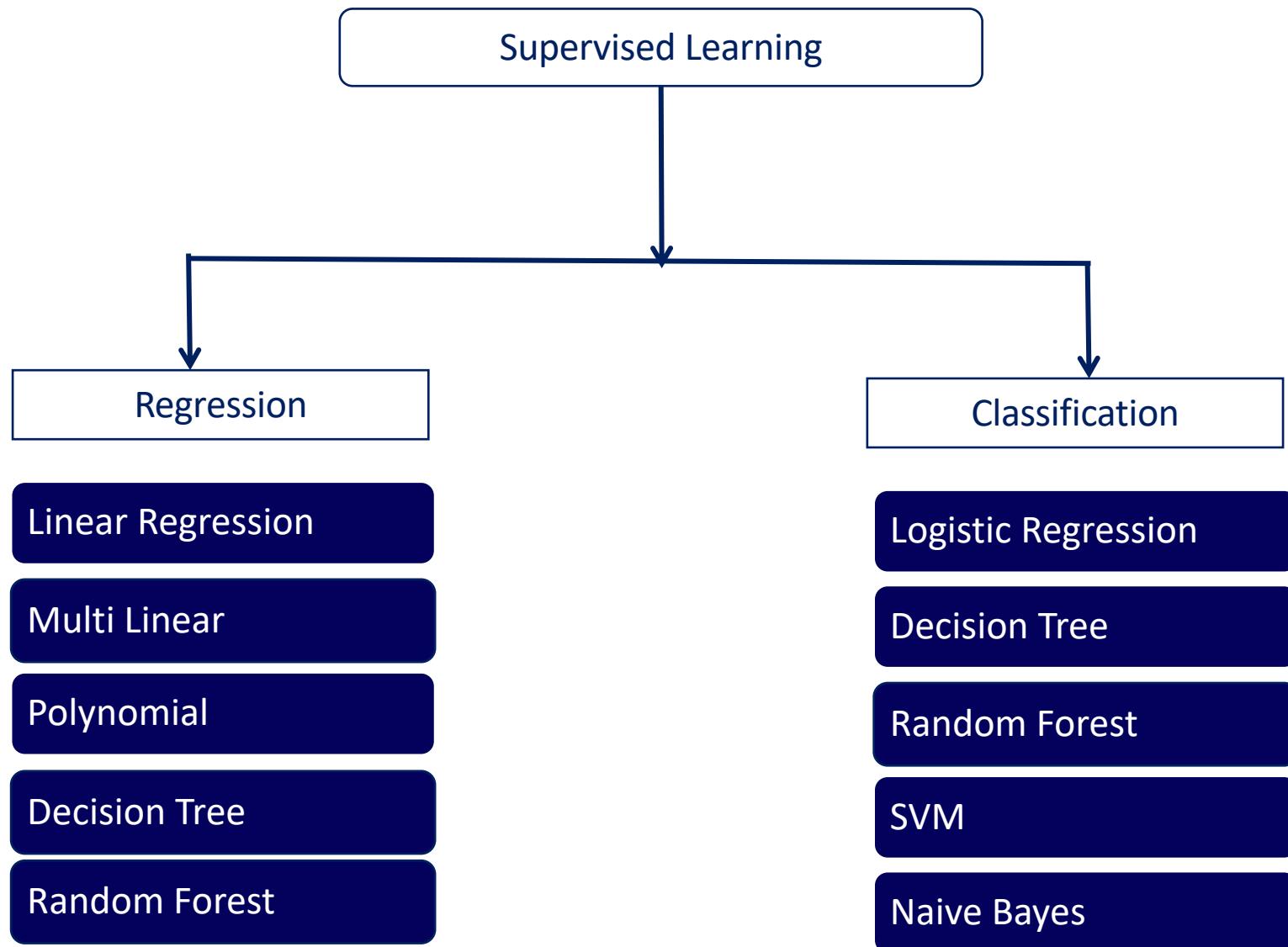
Reward based Learning

Learning from +ve to -ve
Reinforcement

Machine learns how to act
according to environment

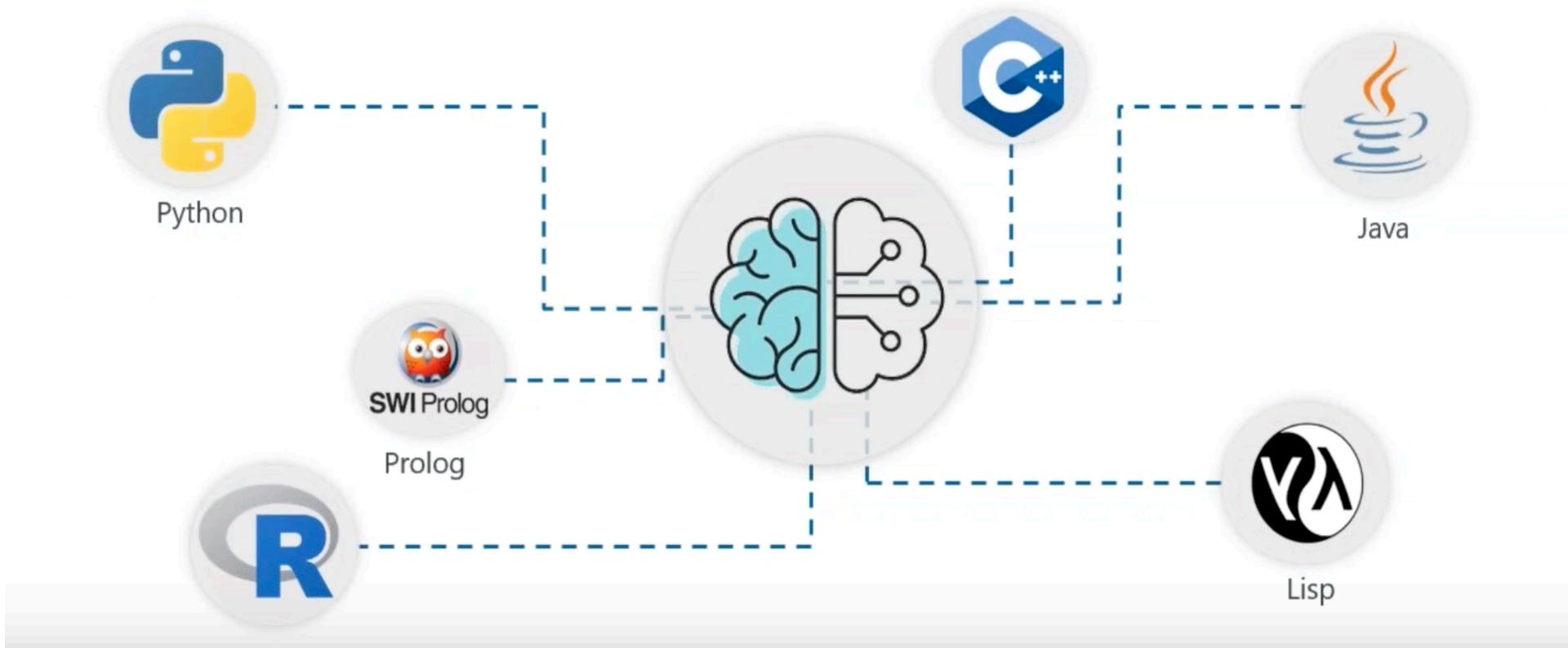
Reinforcement Learning

Supervised Learning Algorithms



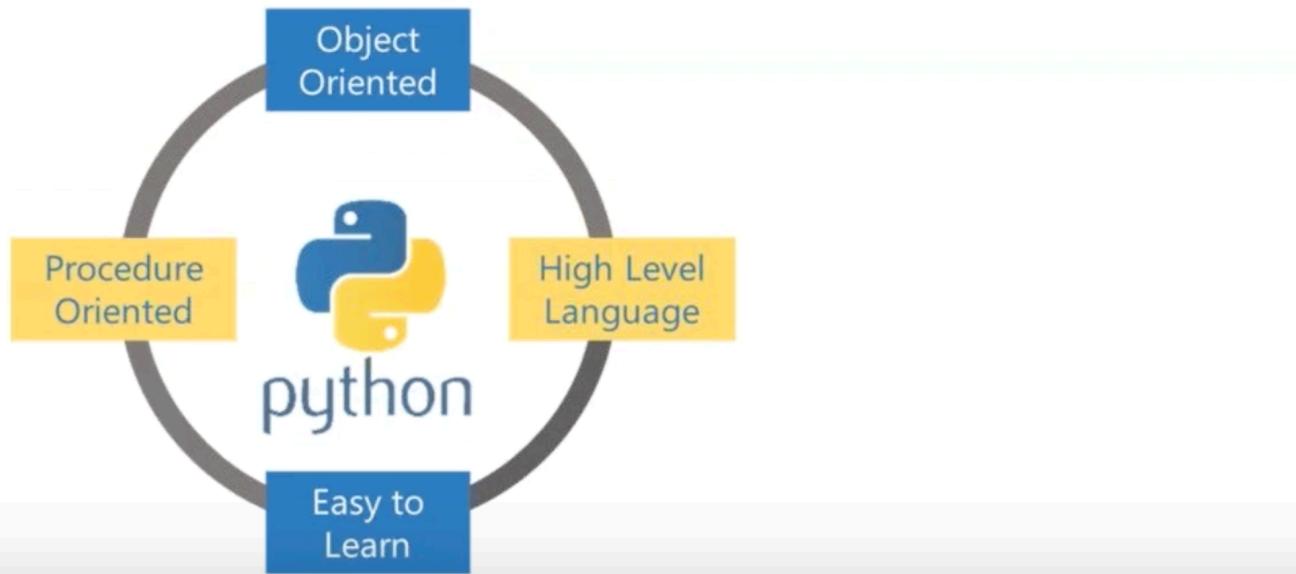
PROGRAMMING LANGUAGES FOR AI

Python is best out of all



INTRODUCTION TO PYTHON

- Python is a **Functional**, **Object oriented**, **Interpreter dependent** and **Modular oriented** programming language.
- Python was created by Guido Van Rossum in 1989
- He made Python as open source in 1990 called PSF



Useful Resources:

IBM Cloud: Build for free.

Apps, AI, analytics, and more. Build with 40+ Lite plan services at no cost to you - ever.

<https://cloud.ibm.com>

Code Patterns

Complete solutions to problems that developers face every day.

<https://developer.ibm.com/patterns/>



Developer Community-India: Facebook Group

Brings coders together as a community and tap into our collective innovative power.

<https://www.facebook.com/groups/2812932708919937>

Thank You!