

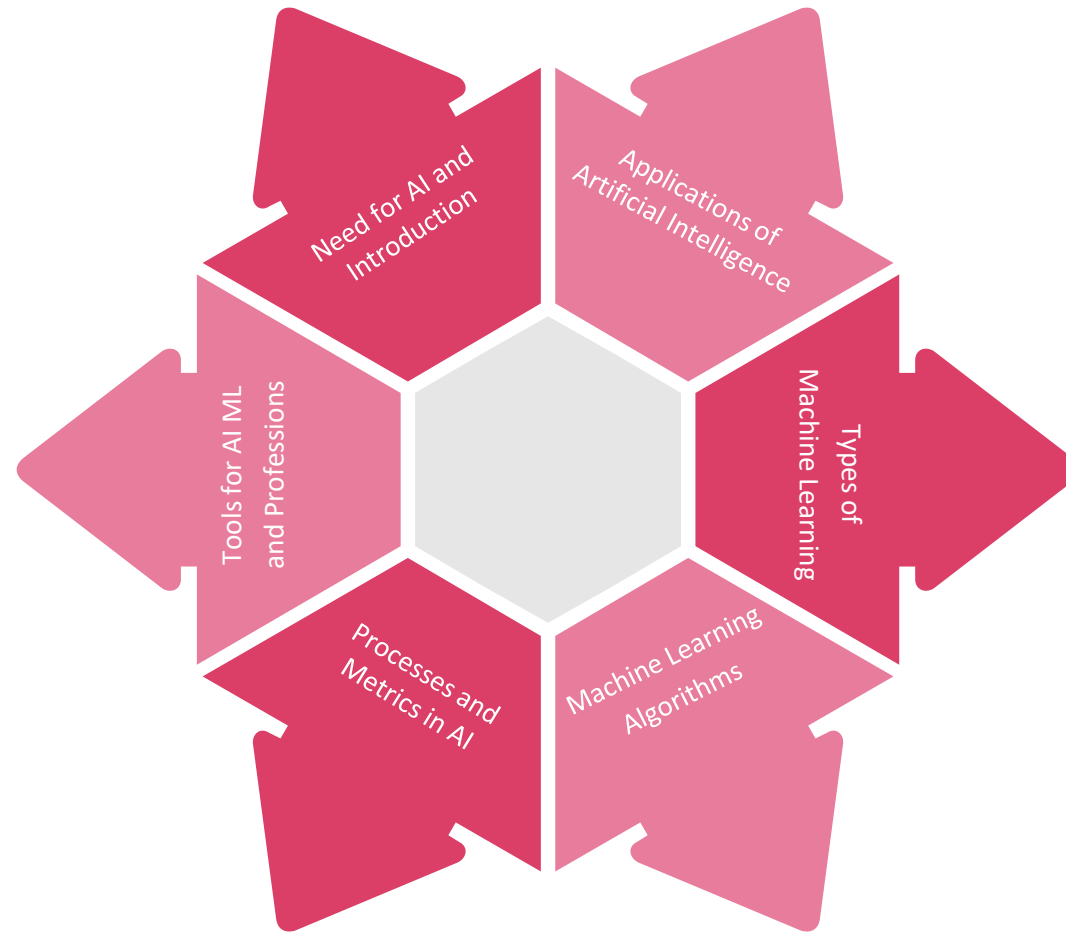
AI ML WORKSHOP



AGENDA

Topics to be covered

These are the topics that we will be going through in our event today pertaining to Artificial Intelligence and Machine Learning.



Why do we need AI ?

The need for AI and ML has never been of such extensive importance like today, thanks to exponential increase in data generation and need for solving highly perplexed problems!

1

Increase in data generation

2

Discover patterns and trends

3

Solve complex patterns

What is AI and ML ?



ARTIFICIAL INTELLIGENCE

It refers to any intelligence exhibited by a computer, robot, or other machine that can mimic the perception, learning, problem-solving, and decision-making capabilities of the human mind.

MACHINE LEARNING

Machine learning (ML) is a branch of artificial intelligence (AI) focused on building applications that learn from data, experience and improve their decision-making or predictive accuracy over time without being programmed to do so.

Applications of AI & ML

There are innumerable examples of AI and ML being used in our daily lives!
Would you like to share some of them that you know about?

NETFLIX

Netflix takes AI into consideration to show us web-series and movies that are of our liking based on our history data on their platform.

FACEBOOK

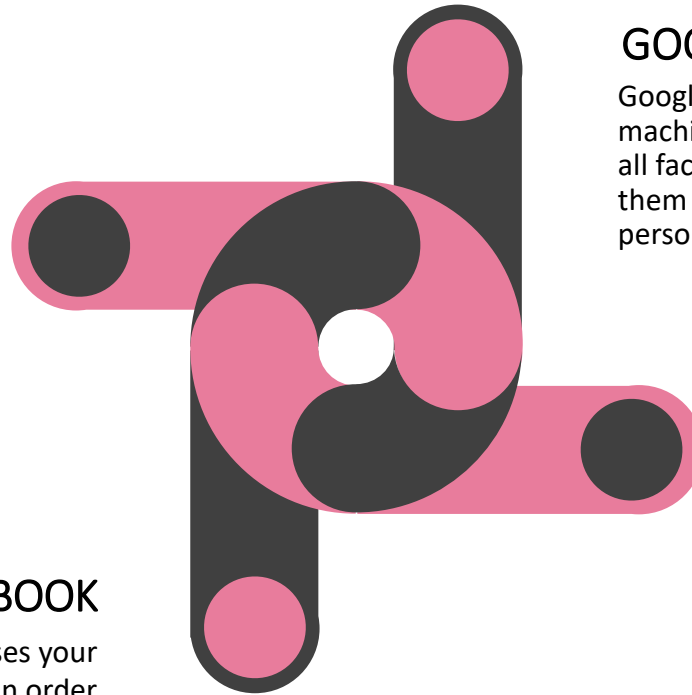
Facebook extensively analyses your data through ML algorithms in order to gain insights on your profile to show you personalized Ads.

GOOGLE

Google uses artificial intelligence and machine learning algorithms in almost all facets of their services to make them cater to everyone in personalized manner.

TESLA

Tesla utilizes AI in various ways, the most famous of which is it's auto-pilot feature that helps you take a back-seat and enjoy your journey while the car drives on it's own.



TYPES OF ML

1

SUPERVISED MACHINE LEARNING

It refers to the type of machine learning where the machine learns from well labelled data and makes appropriate predictions.

2

UNSUPERVISED MACHINE LEARNING

It refers to the type of machine learning where the machine learns from unlabeled data and understand patterns on it's own for predictions.

3

REINFORCEMENT MACHINE LEARNING

It refers to the type of machine learning where the machine learns from its environment by taking rewards into consideration.

Various ML ALGORITHMS

Regression:

- Linear Regression (LR)
- Logistic Regression (LogR)

Clustering:

- K Means Clustering (KMC)
- Density based Clustering (DBC)

Instance:

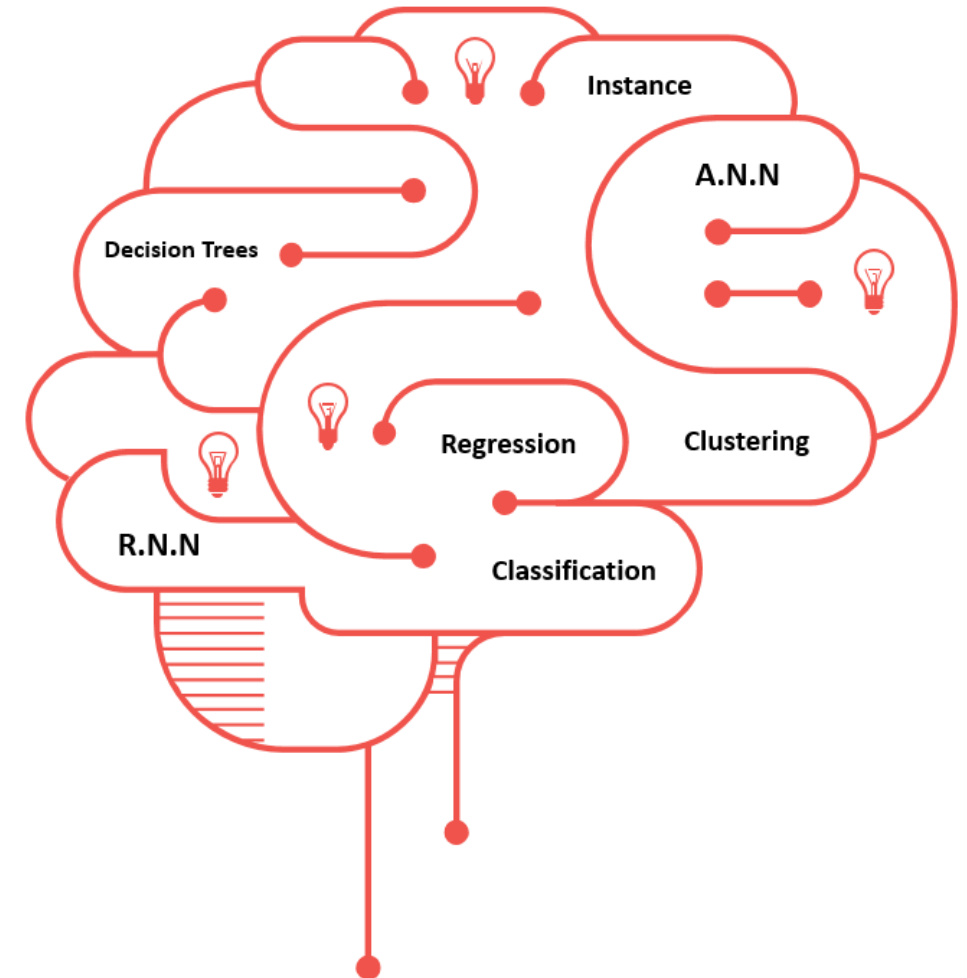
- Support Vector Machines (SVM)
- K Nearest Neighbor (KNN)

Neural Network:

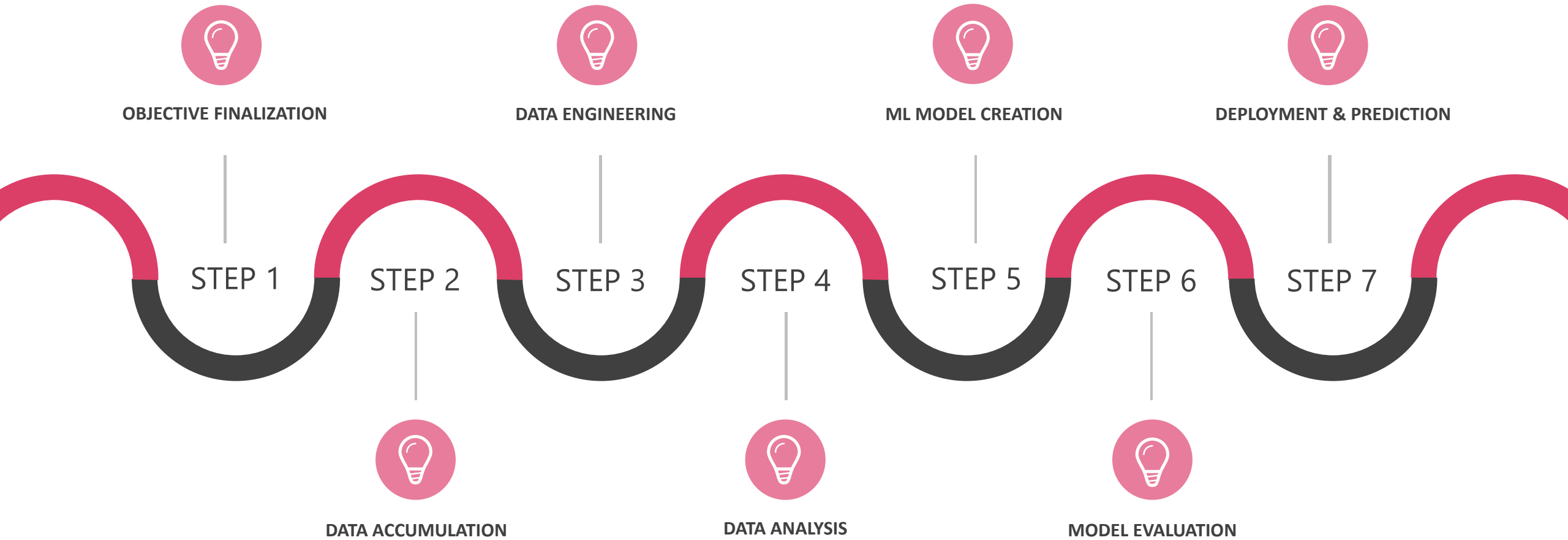
- Artificial Neural Network (ANN)
- Recurrent Neural Network (RNN)

Decision Tree:

- Random Forest Decision Tree (RFDT)



Processes in AI ML



Various ML METRICS

- Accuracy
- Precision
- Recall
- Hit Ratio
- MAE
- MSE



Tools for AI ML



The most widespread utilized programming languages for AI ML are Python, Java, R and dot NET.

Programming Languages



The most widespread utilized libraries for machine learning (in python) are Scikit Learn, Tensorflow and PyTorch.

Machine Learning Libraries



The most widespread utilized libraries for analysis or analytical purposes are Numpy, Pandas, Theano and NLTK.

Analysis / Analytics Libraries



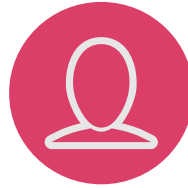
The most widespread utilized libraries for data and result outcome visualization purposes are Seaborn and Matplotlib.

Visualization Libraries

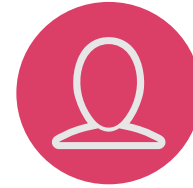
AI ML Professions



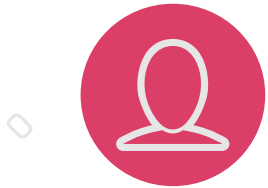
Data Analyst



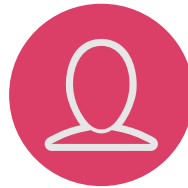
Data Scientist



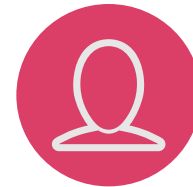
ML Engineer



Software Eng./Dev.



Data Engineer



Data Architect



THANK YOU!

AI ML Workshop

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