

Welcome to Our Channel



Artificial Intelligence

AI2YOU Channel

Machine Learning Course 2023

Introduction

P01V01

AI2YOU
Virtual Learning

Syllabus

Part 1

Introduction

Part 2

**Supervised Learning
Algorithms**

Part 3

**Unsupervised Learning
Algorithms**

Part 1

NumPy

Pandas

Matplotlib

Seaborn



Part 2

Linear Regression

Gradient Descent(GD)

**Polynomial
Regression**

Logistic Regression

Data Cleaning

**Overfit&Underfit,
Bias&Variance**

Regularization

**K-Nearest
Neighbors(KNN)**

Naive Bayes Classifier

**Support Vector
Machines(SVM)**

Decision Trees(DT)

Random Forest(RF)



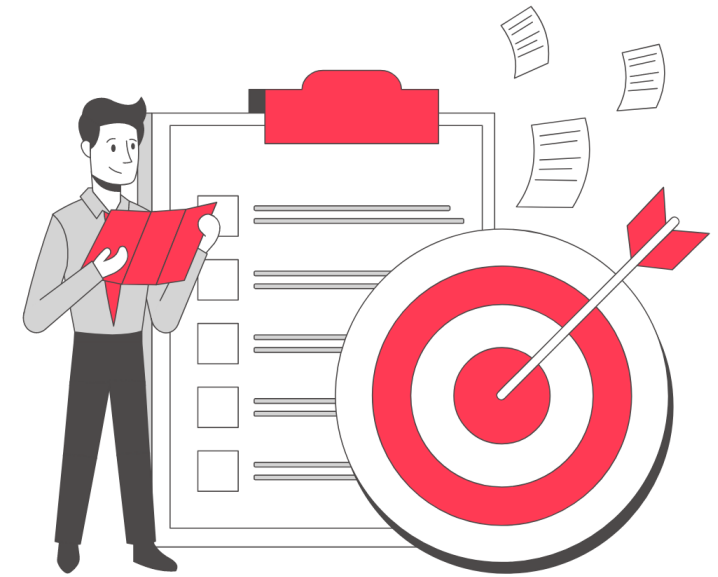
Part 3

K-Means clustering

**Principal Component
Analysis(PCA)**

DBSCAN

Hierarchical Clustering



Frameworks

Data Preprocessing

Pandas

Machine Learning

scikit-learn

Visualization

Matplotlib

seaborn

plotly

NumPy





What is Artificial Intelligence?

به هر تکنیکی که کامپیوترها یا ماشین‌ها را قادر می‌سازد تا مانند انسان‌ها رفتار کنند،
هوش مصنوعی می‌گویند.



What is Machine Learning?

یادگیری ماشین زیر مجموعه هوش مصنوعی است که به کامپیوترها یا ماشین‌ها این قابلیت را می‌دهد تا بدون برنامه ریزی مستقیم یاد بگیرند.

Machine Learning Examples

Inbox
Spam



Machine Learning Examples



Data types

Structured Data

Time Series Data

Tabular Data

Unstructured Data

Image

Text

Voice

Dataset

feature

Prediction

Size(m ²)	#bedrooms	#floors	Age	Price
2104	5	1	45	460
1416	3	2	40	232
1532	3	2	30	315
852	2	1	36	178
952	2	1	65	271
1244	3	1	64	300
1947	3	2	17	509
1725	3	2	42	394
1959	3	2	15	540
1314	2	1	14	415

sample

Train

80

20

Test

validation



AI2YOU
Virtual Learning

The logo is a large red circle containing a white line-art illustration of a person wearing a graduation cap and headphones, sitting at a desk with a play button icon. Below the illustration, the text "AI2YOU" is written in a large, bold, white sans-serif font, and "Virtual Learning" is written in a smaller, white sans-serif font below it.

The End

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