**Link:**[**https://tinyurl.com/adverk007**](https://tinyurl.com/adverk007)

**Hour 1 (9th June 2023):**

Google Colab setup

Navigation

print() function

comment

Variables

DataTypes

**Hour 2 (10th June 2023):**

Typecasting

Operators

input() function

Conditional statements

Loops

**Hour 3,4 (11th June 2023):**

Strings

String functions/methods: upper(), lower(), title(), capitalize(), swapcase(), split(), join(), replace(), strip()

Tuples

Lists

List methods:

remove(),pop(),insert(),append(),index(),copy(),count(),extend(),sort(),reverse(),clear()

Dictionaries

Dictionary methods

Functions

User defined function

Lambda function

Libraries

Importing and installing the libraries

time.sleep()

Math library

**Hour 5 (13th June 2023):**

Numpy

Arrays in numpy

Attributes

Size

Shape

Ndim

Dtype

**Hour 6 (14th June 2023):**

reshaping

Np.random, seed

Aggregations in numpy

np.arange()

Matplotlib

**Hour 7 (16th June 2023):**

Customization of graphs

Line graph and bar graph customization

<https://adverk.net/courses/nwp-3085-artificial-intelligence-june-july-2023/>

**Hour 8 (17th June 2023):**

Pandas

Series

DataFrames

Addition of column

**Hour 9,10 (18th June 2023):**

Delete rows/columns

Loading csv files into pandas

Navigation

Machine Learning

ML vs AI vs DL vs DS

**Hour 11 (24th June 2023):**

Types of ML

Supervised vs Unsupervised vs Semi-Supervised vs Reinforcement Learning in ML

Linear Regression

Mathematical working and Geometric Intuition of Linear Regression

**Hour 12 (25th June 2023):**

Implementation of salary data on python

Metrics

ML model creation guidelines

**Hour 13,14 (27th June 2023):**

App creation for linear regression

Streamlit basics

Streamlit text formats

Number inputs

Button in streamlit

KNN

Geometric Intuition

Mathematical working of streamlit

Demonstration on google sheets

Data cleaning in pandas (removing kg and cm from numerical values)

**Hour 15,16 (28th June 2023):**

Implementation of KNN on google colab for height and weight data

Classification metrics

Streamlit webapp project

**Hour 17,18 (30th June 2023):**

Laptop Price Prediction

EDA until the screen resolution column

**Hour 19,20 (1st July 2023):**

EDA for laptop price prediction

Train test split

**Hour 21,22 (2nd July 2023):**

Applying regression algorithms

One Hot Encoding

Pipeline

Column Transformer

Pickle library

SelectBox and number input in streamlit

App creation

**Hour 23,24 (3rd July 2023):**

Movie Recommender System

ast library

literal\_eval

Text cleaning from movie data

**Hour 25,26(4th July 2023):**

Basic NLP concepts

count vectorization

Stemming vs lemmatization

Cosine similarity

enumerate function

sorted function

Movie recommendation

**Hour 27,28(5th July 2023):**

App creation for movie recommender system

API key from TMDB

Requests library

Json viewer

St.columns vs st.tabs

**Hour 29,30(7th July 2023):**

Computer Vision

Np.ones, np.zeros

Working with the colors

Draw lines, circles and rectangles on image

**Hour 31,32(8th July 2023):**

working with images

cv2.resize()

Face detection

Haar cascade

Eyeglasses detector

OCR: Optical Character Recognition

**Hour 33(14th July 2023):**

Cars dataset cleaning

Projects

**Hour 34,35(16th July 2023):**

Cars dataset cleaning and model building

Project discussion, submissions, etc.