# MY ML Journey

## Introduction to ML

* Training vs Inference
* Sophisticated vs unsophisticated
* Classification vs regression

## NumPy

### Basic Operations

* Myarr=np.array()
* Myarr.ndim (dimentions)
* Myarr.dtype (datatype)
* Myarr=np.array([],dtype=np.floa64) (explicit datatype )
* Myarr.size (number of elements)
* Myarr.itemsize (size of each element)
* Myarr.shape (row and columns)
* Myarr.reshape(3,2) (change dimention but must be compatible)
* Myarr.min() and Myarr.max()
* Myarr.sum(axis=1) for row addition Myarr.sum(axis=0) for column addition
* Np.sqrt(Myarr) , Np.square(Myarr) , Np.std(Myarr)
* Np.sort(Myarr) (sorting)
* Np.sort(Myarr,axis=None ) (array become flateened)
* Np.zeros((2,3)) (array with zeros and 2\*3 dimention)
* Np.arrange(20,30,2) (array elements from 20-30 even only)
* Np.linespace(10,20,5) (array with 5 elements with proper spacing)
* Np.ravel() (return new flateened array)
* Np.flatten (return new + change original)

### Matrix Operations

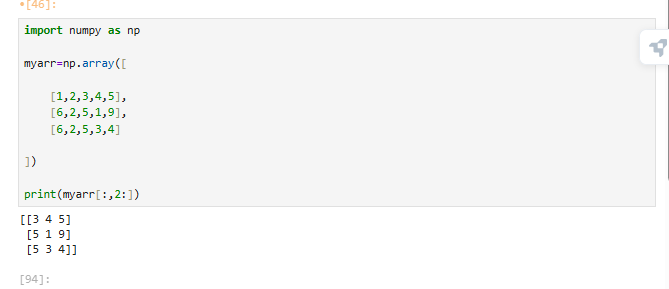
A screenshot of a computer

AI-generated content may be incorrect.

### A white background with black text AI-generated content may be incorrect.

### Matrix Opereation(splicing,stalking)

* np[:,2:]
* np.hstack(()),np.vstack(()),np.hsplit(),np.vsplit()
* np[np[“name”]== “hamza”]
* argmax



### A screenshot of a computer AI-generated content may be incorrect.

# A screenshot of a computer program AI-generated content may be incorrect.

# Data Visualizing and processing

1. Df=pd.read\_csv(“movie.csv”)
2. Df.head(7)
3. Df.tail(4)
4. Df.sample(4)
5. Df.[2:6]
6. Df.loc[0,”name”]
7. Df.iloc[1,2]
8. Df.shape[]
9. Df.[“ imdb\_rating”] return series rather then the dataframe
10. Df.[[“title”,“name”]]
11. Df[df.industry==”boolywood”]
12. Df.columns
13. Df[“industry”].unique()
14. Df[“industry”].value\_counts()
15. Df.describe
16. Df.info
17. Df[(df[imdb\_rating]==df.imdb\_rating.max()) | (df.imdb\_rating== df.imdb\_rating.min()]
18. Df[“newColumn”]= df[“release\_year”].apply(lamd X: 2023-x)]
19. Df[“profit”]=df.apply(lamda X:x[‘revenue’] – x[“budget”],axis=1)
20. Df.set\_index(“title”,inplace=True)
21. Df.reset\_index(inplace=True)