ESTD - 1928

SNJB

An Internship Presentation on

"Artificial Intelligence"

Under the Guidance of

Prof. Lekha Surana

By

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Sunday, June 9, 2024

Outline of Presentation

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Internship Company Details

Acmegrade Private Limited is an edutech platform to train and educate students in India and abroad for various educational programs, research and development of products and teaching aids to supplement education. It is headquartered in Bangalore.

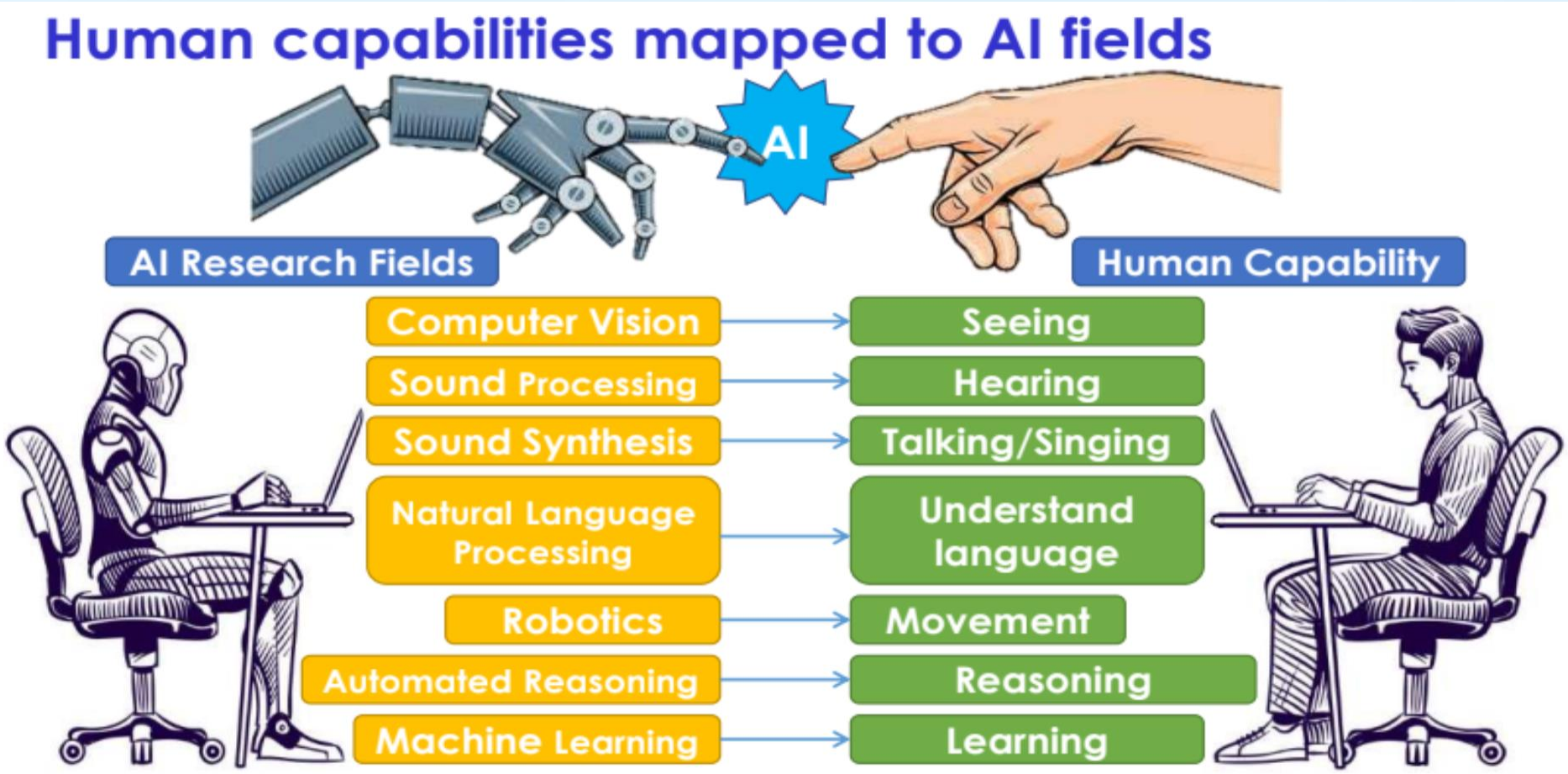
Internship Company Details

Acmegrade’s mission is to give the youth of today the chance to learn and upskill themselves. Our supervised internships and creative and Industry relevant projects make sure that they walk into the workforce equipped with everything they need to be successful. Our mission is to define the concept of education.

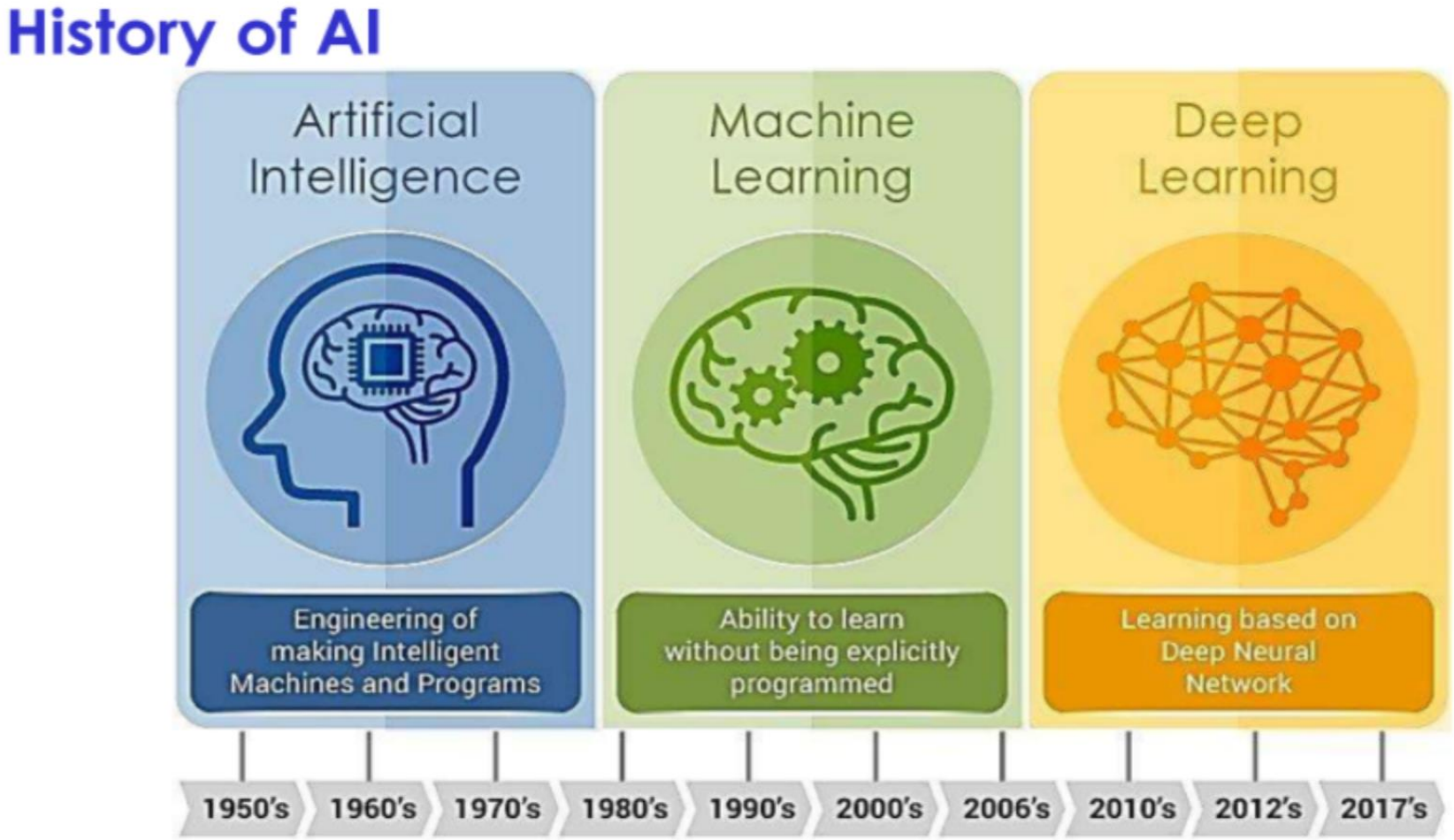
Features:-

- LMS access portal
- Live Interactive Sessions
- Industrial projects
- Distinguished mentors

Introduction to Artificial Intelligence



Introduction



Introduction

Recommendation Systems are statistical algorithms that recommend products based on similarities between the 'buying trends of various users' or similarities between 'products' termed as Collaborative Filtering .

- Content based filtering: **Netflix**
- Collaborative based filtering: **Amazon**

This project is performed by suggesting other movies that are most similar to a particular movie (CORRELATION).

Introduction

- With the help of Artificial Intelligence, the following is determined.
- Which movies are going to be recommended next after ‘StartWars’ and comedy ‘LiarLiar’?
- Recommended based on ‘User Ratings’.
- Concept of **‘Correlation’.**

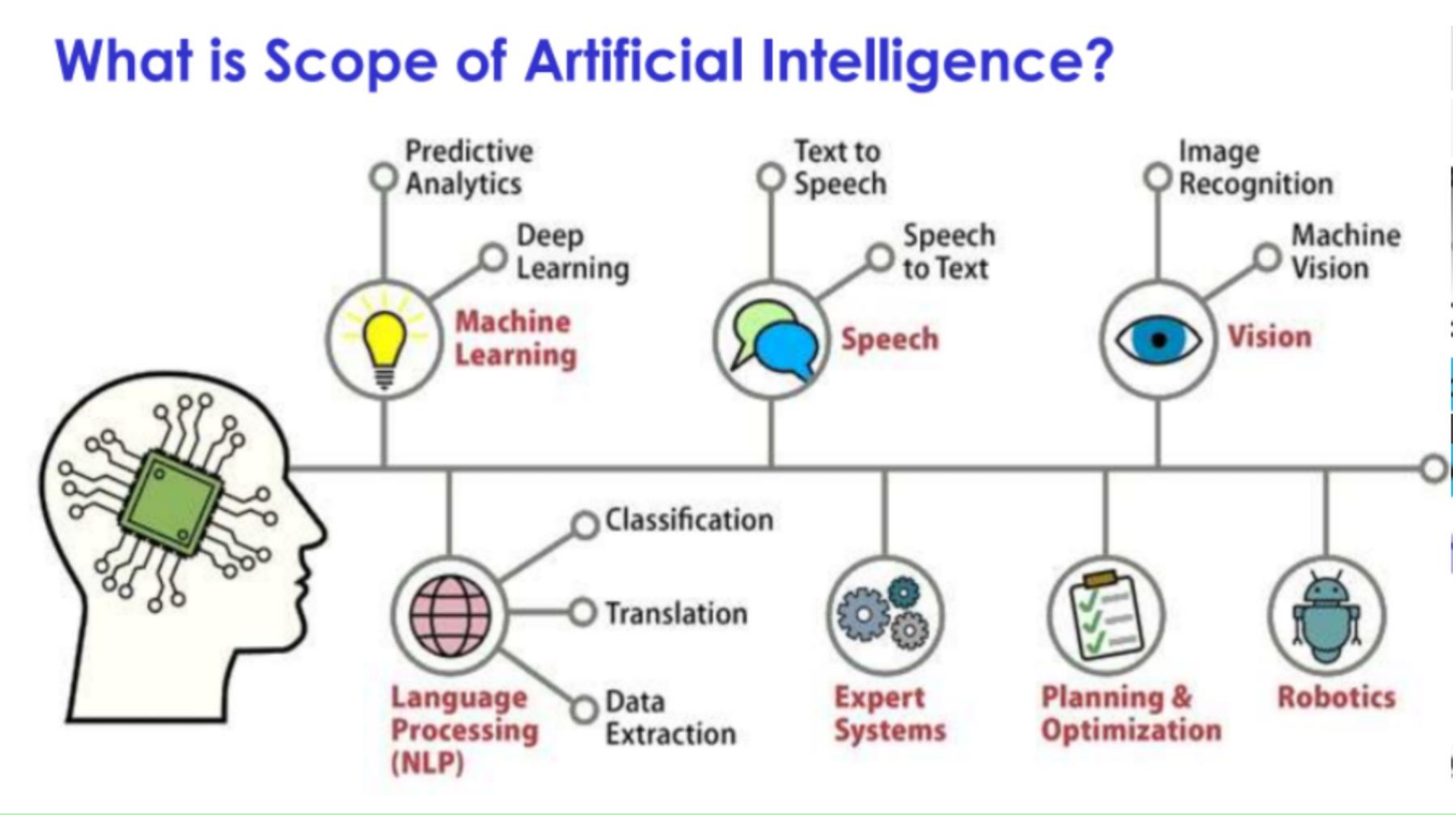
Objectives of Internship

- **Objective 1**: To gain knowledge about the concepts of Artificial Intelligence.
- **Objective 2**: To gain hands-on experience by working under the company's industrial projects based on Artificial Intelligence and Machine Learning concepts such as:- Correlations, Regression, Neural Networks, Image Processing and Classification.
- **Objective 3**: Building a Recommendation System.

Problem Statement

To create a machine learning model called the **‘Movie Recommendation System’** which is going to recommend the movies next after ‘StarWars’ and the comedy ‘LiarLiar’ with the help of Correlation concept.

Scope of Artificial Intelligence



Motivation/Scope of Internship work

- This internship provides unique opportunities for learning outside of academic settings.
- Exposed me to new tasks and help me learn goal-specific skills to complete those tasks.
- Gave me experience with technology, people and projects that relate to my career goals.

Methodological details/Live project details

Datasets used :-

Website: MovieLens

- movies_titles.csv[contains title of movies and ids]
- info.csv

Libraries imported :-

- Numpy (to create multi-dimensional arrays)
- Pandas (to read datasets)
- Matplotlib (for EDA)
- Seaborn (for EDA)

Methodological details/Live project details

Install and Import Libraries

To install :-

- !pip install numpy
- !pip install pandas

To import:-

- import numpy as np
- import pandas as pd
- import matplotlib.pyplot as plt
- import seaborn as sns

Methodological details/Live project details

moviemat matrix

```
moviemat = df.pivot_table(index='user_id',columns='title',values='rating')
moviemat.head()
```

title	'Til There Was You (1997)	1-900 (1994)	101 Dalmatians (1996)	12 Angry Men (1957)	187 (1997)	2 Days in the Valley (1996)	20,000 Leagues Under the Sea (1954)	2001: A Space Odyssey (1968)	3 Ninjas: High Noon At Mega Mountain (1998)	39 Steps, The (1935)	...	Yankee Zulu (1994)	Year of the Horse (1997)	You So Crazy (1994)	Yo Frankens (1
user_id															
0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	
1	NaN	NaN	2.0	5.0	NaN	NaN	3.0	4.0	NaN	NaN	...	NaN	NaN	NaN	
2	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	1.0	NaN	...	NaN	NaN	NaN	
3	NaN	NaN	NaN	NaN	2.0	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	
4	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	

5 rows × 1664 columns

Methodological details/Live project details

On Correlation, recommendations after StarWars

```
In [40]: corr_starwars[corr_starwars['num of ratings']>100].sort_values('Correlation',ascending=False).head()
```

Out[40]:

title	Correlation	num of ratings
Star Wars (1977)	1.000000	584
Empire Strikes Back, The (1980)	0.748353	368
Return of the Jedi (1983)	0.672556	507
Raiders of the Lost Ark (1981)	0.536117	420
Austin Powers: International Man of Mystery (1997)	0.377433	130

Methodological details/Live project details

On Correlation, recommendations after LiarLiar

Now the same for the comedy Liar Liar.

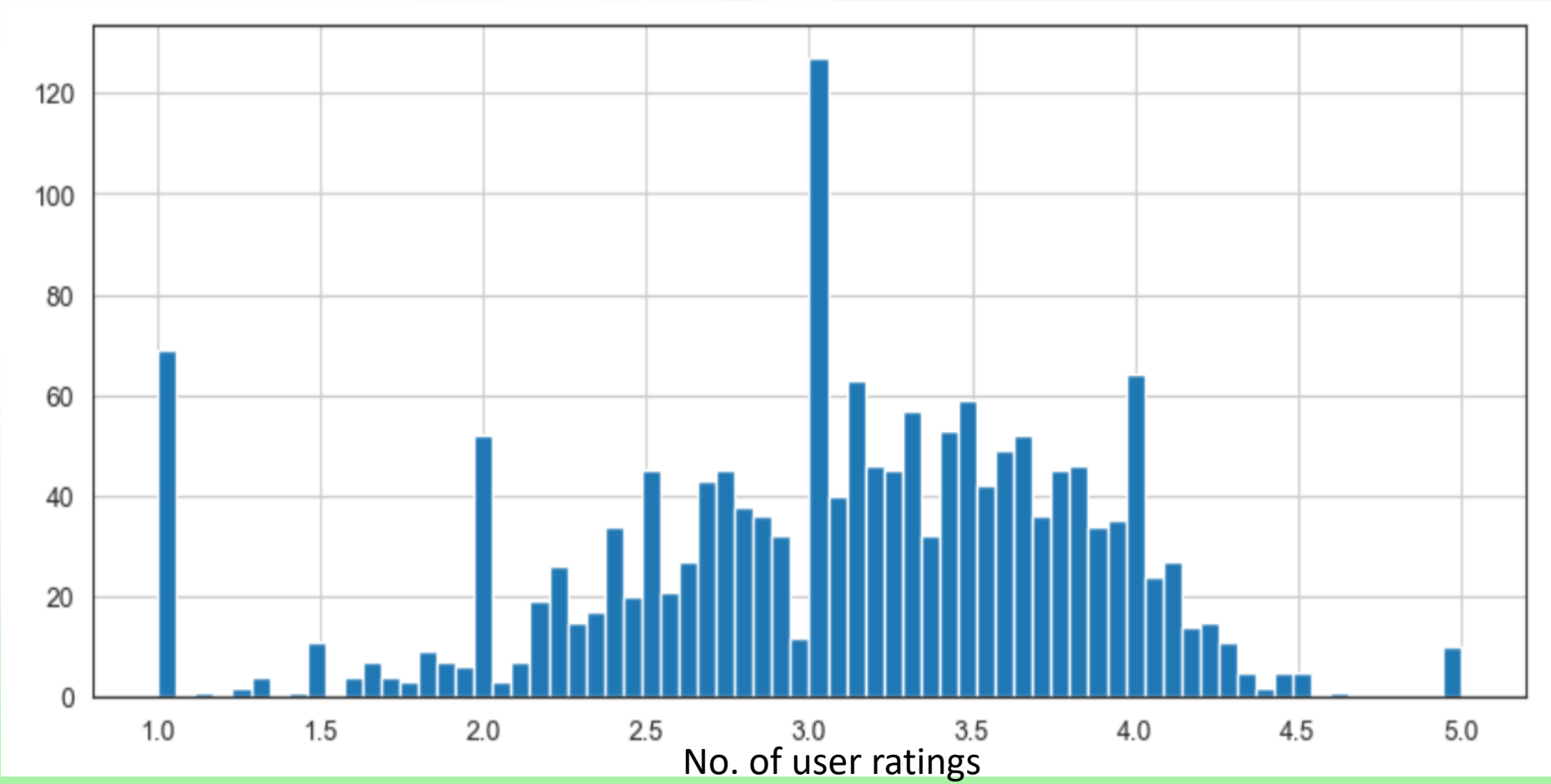
In [44]:
```
corr_liarliar = pd.DataFrame(similar_to_liarliar,columns=['Correlation'])
corr_liarliar.dropna(inplace=True)
corr_liarliar = corr_liarliar.join(ratings['num of ratings'])
corr_liarliar[corr_liarliar['num of ratings']>100].sort_values('Correlation',ascending=False).head()
```

Out[44]:

title	Correlation	num of ratings
Liar Liar (1997)	1.000000	485
Batman Forever (1995)	0.516968	114
Mask, The (1994)	0.484650	129
Down Periscope (1996)	0.472681	101
Con Air (1997)	0.469828	137

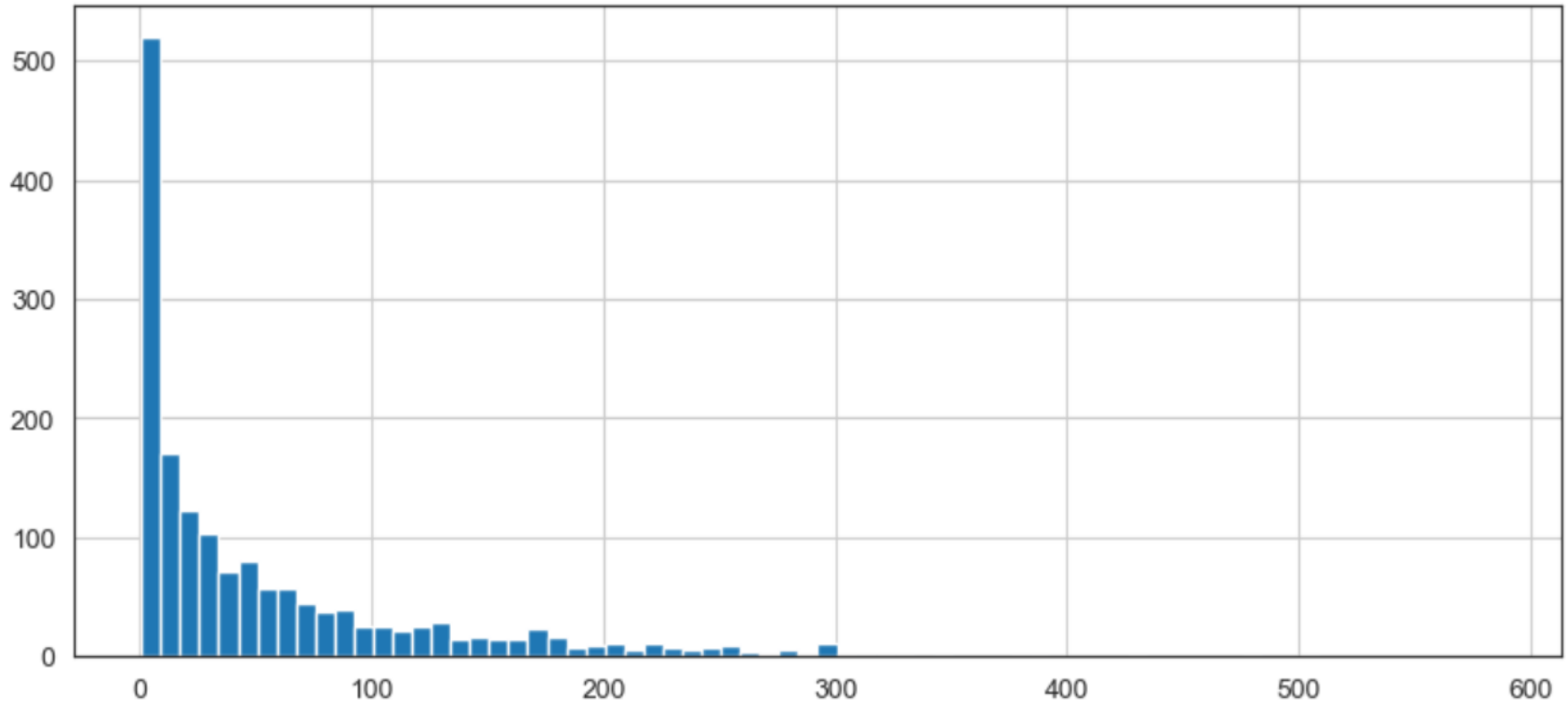
Data Analysis and Interpretations of Project

Exploratory Data Analysis (Histograms)



Data Analysis and Interpretations of Project

Exploratory Data Analysis (Histograms)



Results and Learning from Internship

- The concepts of Artificial Intelligence.
- The concept of Correlation.
- Building Movie Recommendation System.
- Learned working with different libraries such as numpy, matplotlib, seaborn, etc…

References

- https://github.com/suhanitatiya/Movie-Recommendation-System
- https://grouplens.org/datasets/movielens/
- https://www.kaggle.com/
- International Journal of Engineering Research & Technology (IJERT)
- Reference Author : Jose Portilla From Udemy
- Towards Data science and Medium articles
- https://www.linkedin.com/in/naikkrish/?originalSubdomain=in

Internship Attendance Record

ATTENDANCE SHEET

Name & Address of Organization

Acmegrade Pvt Ltd.
HSR Layout, Bengaluru

Name of Student:- Suhani Mahendra Tatiya

Roll. No:- 23

Name of Course:- Artificial Intelligence

Date of Commencement of Training:- 12/12/2023

Date of Completion of Training: 12/01/2024

Student Attendance:-

Month & Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
DEC																															
JAN																															

Note:-

1. Attendance Sheet should remain affixed in Daily Training Diary. Do not remove or tear it off.
2. Student should sign/initial in the attendance column. Do not mark 'P'
3. Holidays should be marked in Red Ink in attendance column. Absent should be marked as 'A' in Red Ink.

Rohith.

Signature of Company internship supervisor with company stamp/ seal

(Name Challa Rohit [Acmegrade Head] Contact No. +91 7676812269.

Industry Internship Certificate

acmegrade

MOOD INDIGO
IIT BOMBAY

CERTIFICATE
OF TRAINING COMPLETION

This is to certify that

Mr./Ms. SUHANI MAHENDRA TATIYA

has successfully completed his / her term of Training

in Artificial Intelligence from 12-Dec-2023

to 12-Jan-2024 and has proven his/her

competency with utmost dedication and promise.

Certificate number: AGC2023120458
For certificate authentication
Scan QR code

Challa Rohit
Academic Head

Thank you