

# PROJECT REPORT

## SMART STUDY TIME PREDICTOR USING MACHINE LEARNING

### 1. INTRODUCTION

TIME MANAGEMENT IS ONE THE BIGGEST PROBLEMS FOR STUDENT, STUDNETS STRUGGLE TO MANAGE THEIR TIME AND DECIDE HOW MANY HOURS THEY SHOULD STUDY FOR A PARTICULAR TOPIC.

THIS PROJECT USES SIMPLE MACHINE LEARNING (LINEAR REGRESSION) TO PREDICT THE NUMBERS OF HOURS FOR STUDY BASED ON FACTORS LIKE DIFFICULTY, NUMBER OF CHAPTERS AND PAST SCORE.

THIS IS BEGINNER FRIENDLY PROJECT

### 2. OBJECTIVES

THE MAIN GOAL OF THIS PROGRAM INVOLVE:

- TO DEVELOP A SIMPLE AND USER FRIENDLY SOFTWARE COLLECTING BASIC INFORMATION.
- TO STUDENTS TO ESTIMATE STUDY TIME MORE ACCURATELY
- TO DEVELOP A PRACTICAL STUDENT ASSISTANCE TOOL
- TO BUILD A PREDICTIVE MODEL USING PYTHON.

### 3. APPROACH

#### 3.1 PROBLEM STATEMENT

STUDENTS STRUGGLE TO PLAN THEIR STUDY SCHEDULE BECAUSE:

- SOME CHAPTERS ARE DIFFICULT THAN OTHER
- THEIR PREVIOUS PERFORMANCE AFFECTS THE EFFORT NEEDED
- THEY DO NOT HAVE THE SYSTEM TO CALCULATE STUDY TIMES

## 4. SCOPE OF THE PROJECT

- SUITABLE FOR COLLEGE/SCHOOL STUDENTS
- USEFUL FOR MAKING TIMETABLE
- CAN BE INTEGRATED IN WEBSITES, APP OR STUDY PALNNERS

## 5. IMPLEMENTATION

### PROGRAM STRUCTURE

- TAKES NUMBER OF CHAPTERS
- DIFFICULTY LEVEL
- PAST SCORES

## 8. CODE

```
#SMART STUDY TIME PREDICTOR
#Using Linear Regression
import numpy as np
from sklearn.linear_model import LinearRegression

data=np.array([
    [5,3,60],
    [8,4,55],
    [3,2,80],
    [10,5,50],
    [7,4,65],
])

response=np.array([5,8,3,10,7])

model=LinearRegression()
model.fit(data,response)

print("\n-----")
print("SMART STUDY TIME PREDICTOR")
print("-----")

chapter=int(input("Enter number of chapters: "))
difficulty=int(input("Enter difficulty level (1-5): "))
past_score=int(input("Enter your previous score (%): "))

input=np.array([[chapter, difficulty, past_score]])

predicted_hour=model.predict(input)[0]

print("\n Suggested Study Time: ")
print(f"You should study approx: {predicted_hour:.2f} hours")

if predicted_hour<4:
```

```
if predicted_hour<4:  
    print("You need moderate preparation")  
elif predicted_hour<7:  
    print("You need good preparation")  
else:  
    print("You need strong preparation. Stay consistent!")
```

## 7. RESULT

```
-----  
SMART STUDY TIME PREDICTOR  
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```

```
Enter number of chapters: 5
```

```
Enter difficulty level (1-5): 3
```

```
Enter your previous score (%): 87
```

```
Suggested Study Time:
```

```
You should study approx: 5.00 hours
```

```
You need good preparation
```