📊Data Analysis Daily Worksheet & Cheatsheet

(Beginner → Intermediate | GitHub Friendly)

🔦Daily Routine (30–60 Minutes)

- [ ] Revise 1 concept
- [ ] Write 5–10 lines of code
- [ ] Explore 1 dataset column
- [ ] Create 1 visualization
- [ ] Push changes to GitHub

🗓️Daily Practice Log

Date	Topic	Dataset Used	What I Learned	GitHub Link

🖌️Python Basics Cheatsheet

```
# Variables
x = 10
name = "Data"

# List
nums = [1,2,3]

# Dictionary
student = {"name":"Ali", "age":20}

# Loop
for i in nums:
    print(i)

# Function
def add(a,b):
    return a+b
```

📦NumPy Cheatsheet

```
import numpy as np

arr = np.array([1,2,3])
np.mean(arr)
np.sum(arr)
np.max(arr)
arr.reshape(3,1)
```

💌Pandas Cheatsheet

```
import pandas as pd

df = pd.read_csv("data.csv")

# View
df.head()
df.tail()
df.info()
df.describe()

# Select Columns
df['price']
df[['price','sales']]

# Filter
df[df['price'] > 100]

# Missing Values
df.isnull().sum()
df.fillna(0)

# Groupby
df.groupby('category')['sales'].mean()
```

📊Visualization Cheatsheet

```
import matplotlib.pyplot as plt
```

```
plt.plot(df['price'], df['sales'])
plt.xlabel("Price")
plt.ylabel("Sales")
plt.title("Price vs Sales")
plt.show()
```

```
import seaborn as sns
sns.histplot(df['price'])
sns.boxplot(x=df['category'], y=df['sales'])
```

🧹 Data Cleaning Checklist

- [ ] Remove duplicates
- [ ] Handle missing values
- [ ] Fix data types
- [ ] Rename columns
- [ ] Remove outliers

🔍 Exploratory Data Analysis (EDA)

- Shape of data
- Column types
- Min / Max / Mean
- Correlation
- Distributions

```
df.corr()
```

Important Questions To Ask

- What is the problem?
- Which column is target?
- What patterns exist?
- Any anomalies?

🗄️SQL Cheatsheet

```sql
SELECT * FROM table;
SELECT col1,col2 FROM table;
SELECT * FROM table WHERE price > 100;
SELECT category, AVG(sales)
FROM table
GROUP BY category;
```

🗜️GitHub Daily Commands

```
git status
git add .
git commit -m "daily practice"
git push origin main
```

📁Recommended Repo Structure

```
Data-Analysis-Practice/
  ├─ datasets/
  ├─ notebooks/
  ├─ visuals/
  ├─ README.md
```

📝Daily Reflection

- What was easy?
- What was hard?
- What to revise tomorrow?

🗜️Weekly Mini Project Ideas

- Sales Analysis
- Netflix Movies Analysis
- COVID Data Analysis
- Student Performance

🕐Goal Tracker

- [ ] Python Basics
- [ ] Pandas
- [ ] Visualization
- [ ] SQL
- [ ] Portfolio Project

If you follow this worksheet daily, your GitHub will slowly turn into a strong **Data Analyst Portfolio** 💼📈