Python Pandas Cheat Sheet

Become Data Analyst With Me!

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Basics

```
import pandas as pd              # Import pandas
df = pd.read_csv('file.csv')     # Load CSV
```

View Data

```
df.head()                        # First 5 rows
df.tail()                        # Last 5 rows
df.info()                        # Structure & types
df.describe()                    # Summary stats
df.shape                         # Rows, columns
df.columns                       # Column names
df.dtypes                        # Data types
```

Select & Access

```
df['col']                        # Single column
df[['col1', 'col2']]             # Multiple columns
df.iloc[0]                       # Row by position
df.loc[0]                        # Row by label
df.loc[0, 'col']                 # Specific cell
```

Filter & Sort

```
df[df['Age'] > 30                          # Filter rows
df.sort_values('Age')                      # Sort ascending
df.sort_values('Age', ascending=False)  # Descending
```

Clean Data

```
df.isnull().sum()                          # Check nulls
df.dropna()                                # Remove NaNs
df.fillna(0)                               # Replace NaNs
df.drop('col', axis=1)                     # Drop column
df.rename(columns={'old': 'new'})          # Rename
df['Age'] = df['Age'].astype(int)          # Change type
```

Modify Data

```
df['new'] = df['col1'] + df['col2']        # Add column
df.groupby('col').mean()                   # Group & agg
df.pivot_table(index='A', columns='B',
values='C')  df.merge(df2, on='key')       # Join dfs
```

Apply Functions

```
df['col'].apply(len)                              # Apply function
df['col'].map({'A': 1})                           # Map values
df.apply(lambda r: r['A'] + r['B'], axis=1)  # Row-wise
```

Plot (Quick View)

```
df['col'].hist()                    # Histogram
df.plot(x='A', y='B')               # Line plot
sns.boxplot(x='col', data=df)       # Boxplot
```

Save/Load

```
df.to_csv('file.csv')               # Save as CSV
df.to_pickle('df.pkl')              # Save as pickle
```

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Timeline

Becoming a Data Analyst is a step-by-step journey. This timeline guides you through key skills each week, helping you grow from beginner to confident analyst. Stay curious, stay consistent, and let the data lead the way.

Week 1-2

Core Concepts + Excel + SQL/Python

Week 3

SQL & Python in Depth

Week 4-6

Real Projects + BI Tools

Week 7

Portfolio & Job Prep