

agg() - Aggregation

Reduces each group to a single value

Original (5 rows)

Stock	Sector	Return
AAPL	Tech	5%
MSFT	Tech	8%
NVDA	Tech	12%
JPM	Finance	3%
GS	Finance	6%

`.groupby("Sector")
["Return"].mean()`

Result (2 rows)

Sector	Mean
Tech	8.3%
Finance	4.5%

Use Case: Summary statistics, reports

```
sector_avg = df.groupby('Sector')['Return'].mean()
```

transform() - Transformation

Returns same shape as input

Original (5 rows)

Stock	Sector	Return
AAPL	Tech	5%
MSFT	Tech	8%
NVDA	Tech	12%
JPM	Finance	3%
GS	Finance	6%

`.groupby("Sector")
["Return"].transform("mean")`

Result (5 rows)

Stock	SectorMean
AAPL	8.3%
MSFT	8.3%
NVDA	8.3%
JPM	4.5%
GS	4.5%

Use Case: Adding group-level stats to each row

```
df['SectorMean'] = df.groupby('Sector')['Return'].transform('mean')
```