

## Machine Learning in Finance

### Week 2 LAB LOGBOOK

```
import pandas as pd

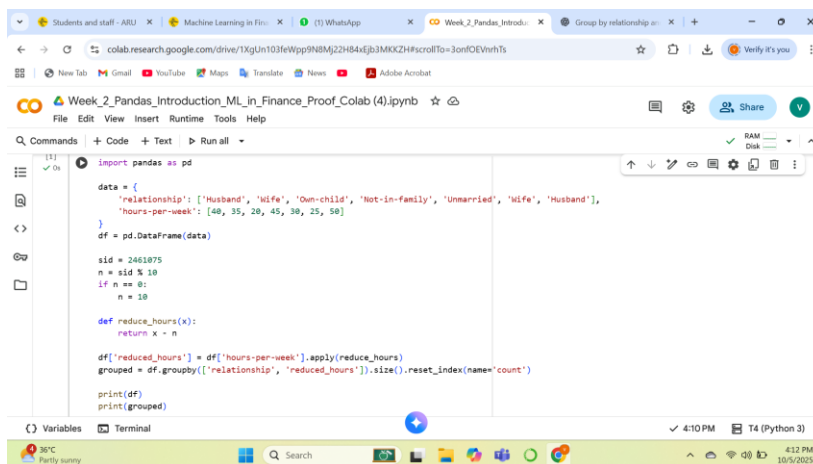
data = {
    'relationship': ['Husband', 'Wife', 'Own-child', 'Not-in-family',
                    'Unmarried', 'Wife', 'Husband'],
    'hours-per-week': [40, 35, 20, 45, 30, 25, 50]
}
df = pd.DataFrame(data)

sid = 2461075
n = sid % 10
if n == 0:
    n = 10

def reduce_hours(x):
    return x - n

df['reduced_hours'] = df['hours-per-week'].apply(reduce_hours)
grouped = df.groupby(['relationship',
                      'reduced_hours']).size().reset_index(name='count')

print(df)
print(grouped)
```



Students and staff - ARJ x Machine Learning in Fi... x [T] WhatsApp x Week\_2\_Pandas\_Intro... x Group by relationship a... x

colab.research.google.com/drive/1XgUn103feWpp9N8Mj22H84djb3MKC2H4scrollTo=3onOEVrh7s

New Tab | Gmail | YouTube | Maps | Translate | News | Adobe Acrobat

Week\_2\_Pandas\_Introduction\_ML\_in\_Finance\_Proof\_Colab (4).ipynb

File Edit View Insert Runtime Tools Help

Commands + Code + Text Run all

print(df)  
print(grouped)

	relationship	hours-per-week	reduced_hours
0	Husband	40	35
1	Wife	35	30
2	Own-child	20	15
3	Not-in-family	45	40
4	Unmarried	30	25
5	Wife	25	20
6	Husband	50	45

	relationship	reduced_hours	count
0	Husband	35	1
1	Husband	45	1
2	Not-in-family	40	1
3	Own-child	15	1
4	Unmarried	25	1
5	Wife	20	1
6	Wife	30	1

Variables Terminal

4:10 PM T4 (Python 3)

9°C Partly sunny

Search

4:13 PM 15/5/2025