

Pass Task 4.2C: Visualize data with grouped bar chart and stacked bar chart

Task description:

According to “[Notifiable Data Breaches Report: July–December 2019](#)” released on 28 February 2020 on the Office of the Australian Information Commissioner (OAIC) [website](#), notifications made under [the NDB scheme](#) by the five industry sectors made the most notifications in the reporting period (top five industry sectors).

The following information is retrieved from the aforementioned report:

Malicious or criminal attack type	Health service providers	Finance	Education	Legal, accounting & management services	Personal services
Cyber incident	37	18	19	26	8
Theft of paperwork or data storage device	12	5	8	2	5
Rogue employee / insider threat	12	11	2	0	1
Social engineering / impersonation	2	6	1	2	0

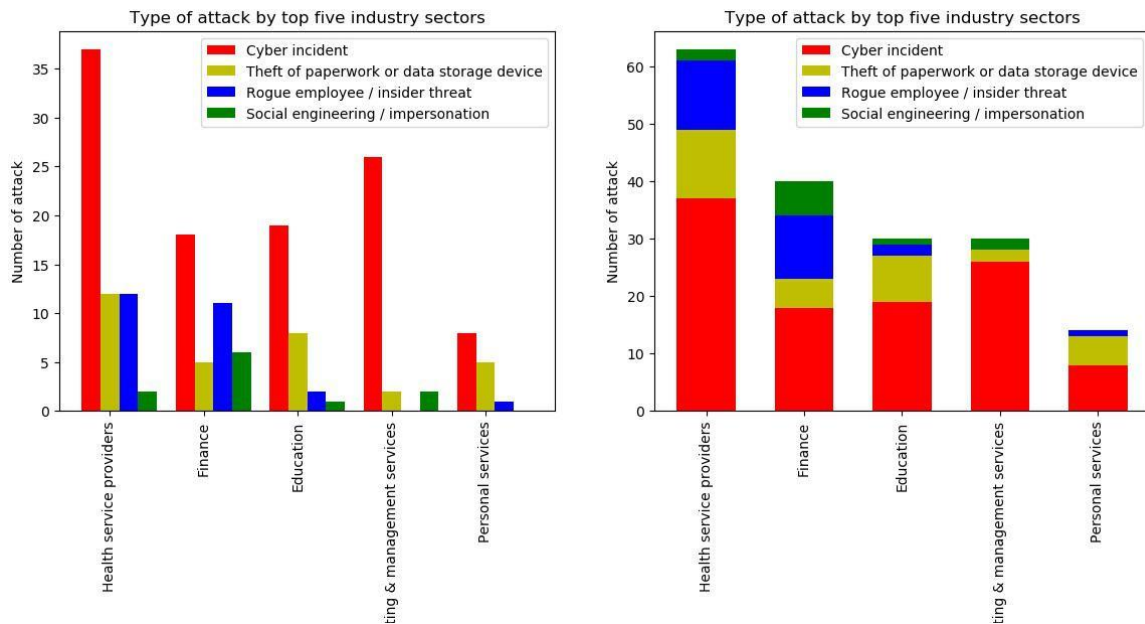
(The above data is for demonstration purposes only. Please download the full version of `Malicious_or_criminal_attacks_breakdown-Top_five_industry_sectors_July-Dec-2019.csv`.)

You are asked to read the file data and visualize the data using matplotlib’s grouped bar chart and stacked bar chart with the following settings:

- `pd.read_csv('file_name', index_col=0, engine='python')`
- `plt.subplots(nrows=1, ncols=2, figsize=(14, 5), dpi=100)`
- `colors = ['red', 'yellow', 'blue', 'green']` for the four attack types (Cyber incident, Theft of paperwork or data storage device, Rogue employee / insider threat and Social engineering / impersonation), respectively. Or of your choice.
- `labels: attack types with rotation=90 ('Cyber incident', 'Theft of paperwork or data storage device', 'Rogue employee', 'Social engineering / impersonation')`
- X axis: the top five industry sectors
- Y axis label: Number of attack
- title: Type of attack by top five industry sectors

- X axis with ticklabel and label rotation: 90
- legend
- other settings of your choice

Sample output as shown in the following figure is for demonstration purposes only.



Submission:

Submit the following files to OnTrack:

1. Your program source code (e.g. task4_2.py)
2. A screen shot of your program running

Check the following things before submitting:

1. Add proper comments to your code