

Pass Task 4.1P: Visualize data using matplotlib

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	Total per attack type
Cyber incident	37	18	19	26	8	108
Theft of paperwork or data storage device	12	5	8	2	5	32
Rogue employee / insider threat	12	11	2	0	1	26
Social engineering / impersonation	2	6	1	2	0	11
Total per sector	63	40	30	30	14	177

You are asked to visualize the above information using matplotlib:

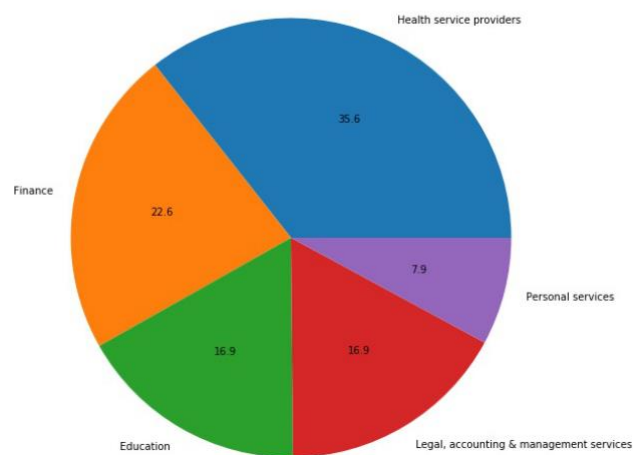
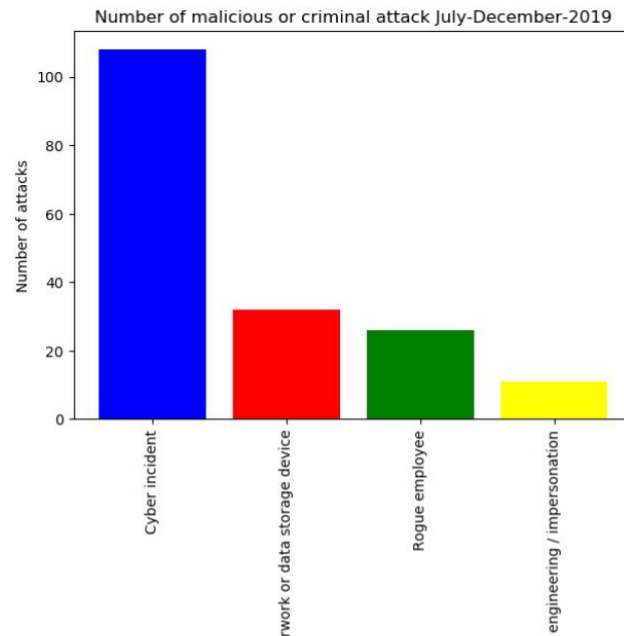
Bar chart with the following settings:

- `figsize=(7,5)`, `dpi=100`
- `colors = ['blue', 'red', 'green', 'yellow']` for the four attack types (Cyber incident, Theft of paperwork or data storage device, Rogue employee / insider threat and Social engineering / impersonation), respectively. Or you choose your preferred colors
- labels: attack types with `rotation=90` ('Cyber incident', 'Theft of paperwork or data storage device', 'Rogue employee', 'Social engineering / impersonation')
- X axis: attack type
- Y axis label: **number of attacks per attack type**
- Title: Number of malicious or criminal attack July-December-2019

Pie chart with the following settings:

- `figsize=(10, 10)`
- `labels`: top 5 industry sectors ('Health service providers', 'Finance', 'Education', 'Legal, accounting & management services', 'Personal services')
- `data`: [number of attacks per industry sector](#)

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. task4-1.py)
2. A screen shot of your program running

Check the following things before submitting:

1. Add proper comments to your code