

1. Accessed DotDigital portal where statistical data on university records is found.

Date	Subject	Description	Status	Actions
17 Jan 2024 17:41	The Citizen (student): Wednesday 1 January	The Citizen: LS teachers, TEF celebrations and meet Ted the therapy dog 🐶	Citizen...	
10 Jan 2024 14:08	The Citizen (student): Wednesday 10 January	The Citizen: Gold for teaching, Welcome events and graduation 🎉	Citizen...	
13 Dec 2023 17:27	The Citizen (student): Wednesday 13 December	The Citizen: Season's Greetings! 🎄	Citizen...	
29 Nov 2023 16:54	The Citizen (student) 29 Nov 2023	The Citizen: A giant snow globe and festive competition on campus?! 🎅	Citizen...	
15 Nov 2023 11:15	The Citizen (student) 15 Nov 2023	The Citizen: Is it your turn to WIN? 🎁	Citizen...	
01 Nov 2023 16:55	The Citizen: 1 November 2023	The Citizen: The Festival of Lights graces Leicester. 🎈	Citizen...	
04 Oct 2023 15:15	The Citizen: 4 October 2023	The Citizen: Celebrating #BlackHistoryMonth 🏳️	Citizen...	
29 Sep 2023 10:52	The Citizen: What's on: Friday 29 September	The Citizen: What's on - Friday 29 September	Citizen...	
28 Sep 2023 9:05	The Citizen: What's on: Thursday 28 September	The Citizen: What's on: Thursday 28 September	Citizen...	
27 Sep 2023 9:18	The Citizen: What's on: Wednesday 27 September	The Citizen: What's on: Wednesday 27 September	Citizen...	
26 Sep 2023 9:01	The Citizen: What's on - Tuesday 26 September	The Citizen: What's on - Tuesday 26 September	Citizen...	
25 Sep 2023 9:00	The Citizen: What's On - Monday 25 September	The Citizen: What's on - Monday 25 September	Citizen...	

2. Collected datasets from freshers week within the past two years.

Name	Date modified	Type	Size
September252023	24/06/2025 2:46 PM	File folder	
September262023	24/06/2025 11:14 AM	File folder	
September272023	24/06/2025 11:14 AM	File folder	
September282023	24/06/2025 11:21 AM	File folder	
September292023	24/06/2025 11:27 AM	File folder	

3. Pre-processed data, using best approaches for the given data.

<input type="checkbox"/>  dataset_September252023.ipynb	Running	4 days ago	192 kB
<input type="checkbox"/>  dataset_September262023.ipynb	Running	4 days ago	178 kB
<input type="checkbox"/>  dataset_September272023.ipynb	Running	4 days ago	203 kB
<input type="checkbox"/>  dataset_September282023.ipynb	Running	3 days ago	200 kB
<input type="checkbox"/>  dataset_September292023.ipynb	Running	3 days ago	199 kB

4. Defined functions and new columns for additional calculations.

```
In [44]: def totalOpens():
    totalOpens = df_emailopened["NumOpens"].sum()
    print("Total number of NumOpens: ", totalOpens)

totalOpens()
Total number of NumOpens:  28672

In [47]: averageOpens = df_emailopened["NumOpens"].mean()
df_emailopened["AverageNumOpens"] = averageOpens

print("Average number of NumOpens:", averageOpens)

Average number of NumOpens: 2.1965831609591664

In [48]: minimumOpens = df_emailopened["NumOpens"].min()
df_emailopened["MinimumNumOpens"] = minimumOpens
print("Minimum number of NumOpens: ", minimumOpens)

Minimum number of NumOpens:  1

In [32]: maximumOpens = df_emailopened["NumOpens"].max()
print("Maximum number of NumOpens: ", maximumOpens)

Maximum number of NumOpens:  30

In [49]: df_emailopened["DateOpened"] = pd.to_datetime(df_emailopened["DateOpened"], format="%d/%m/%Y %H:%M") #convert string to datetime

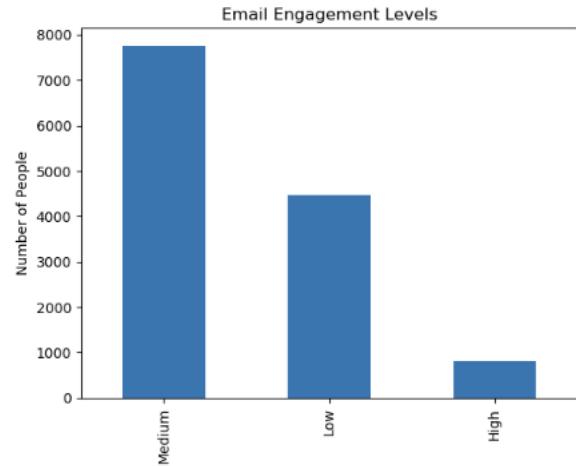
In [34]: df_emailopened["DateOpenedLast"] = pd.to_datetime(df_emailopened["DateOpenedLast"], format="%d/%m/%Y %H:%M") #convert string to datetime

In [35]: df_emailopened["EngagementSpan"] = df_emailopened["DateOpenedLast"] - df_emailopened["DateOpened"]
df_emailopened.head(10)
```

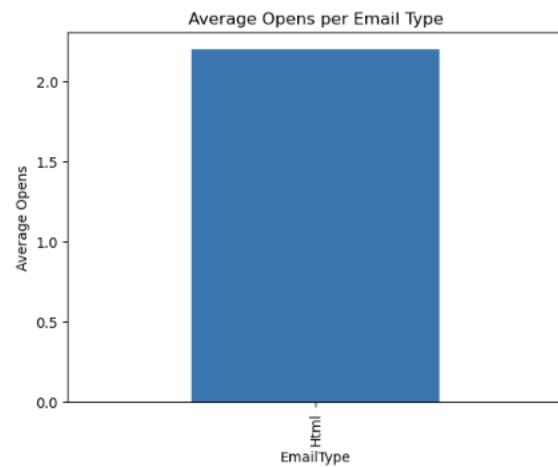
5. Analysed data between comparable variables and information.

6. Created visualisations and trends for the appropriate variables useful for addressing the business problem.

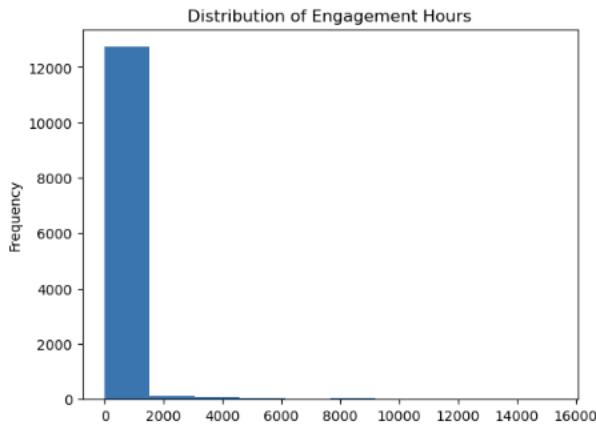
```
In [39]: df_emailopened["Openlevel"].value_counts().plot(kind='bar', title='Email Engagement Levels')
plt.ylabel("Number of People")
plt.show()
#high Levels of medium open Level
#Low Levels of high open Level
```



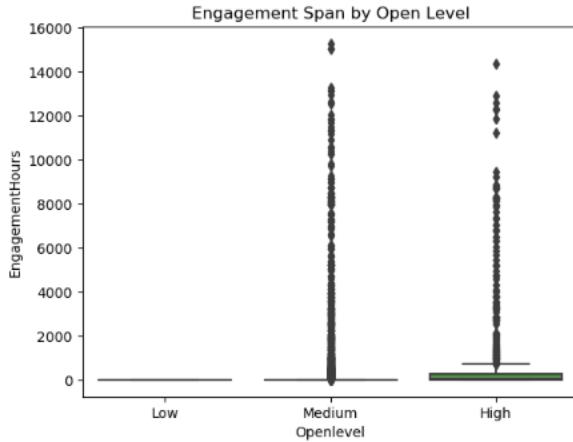
```
In [50]: df_emailopened.groupby("EmailType")["AverageNumOpens"].mean().plot(kind="bar", title="Average Opens per Email Type")
plt.ylabel("Average Opens")
plt.show()
```



```
In [41]: df_emailopened['EngagementHours'].plot(kind='hist', bins=10, title='Distribution of Engagement Hours')
plt.show()
```



```
In [42]: sns.boxplot(x='Openlevel', y='EngagementHours', data=df_emailopened).set_title('Engagement Span by Open Level')
out[42]: Text(0.5, 1.0, 'Engagement Span by Open Level')
```



7. Created a presentation to present findings and deliver recommendations.

The screenshot shows a Microsoft PowerPoint slide titled "Recommendations". The slide content includes a bulleted list:

- Redesign email wording, system, and display
- Utilise drop-in locations on campus for university surveys
- Create different welcome emails for student situation

The slide is numbered 1 of 9. The left sidebar displays five preview thumbnails for other slides, each showing a different chart or graph related to engagement metrics. The bottom of the slide has a footer note: "use more general terms for prizes, I'm not sure if everyone would be appealed to only food and drink vouchers."