

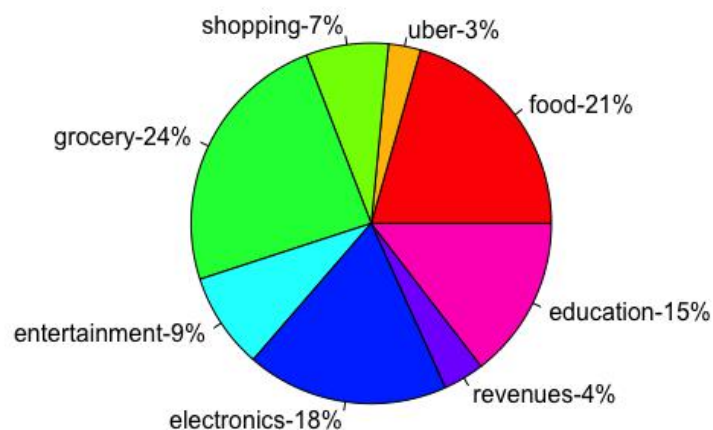
## An Analysis of My Personal Spending

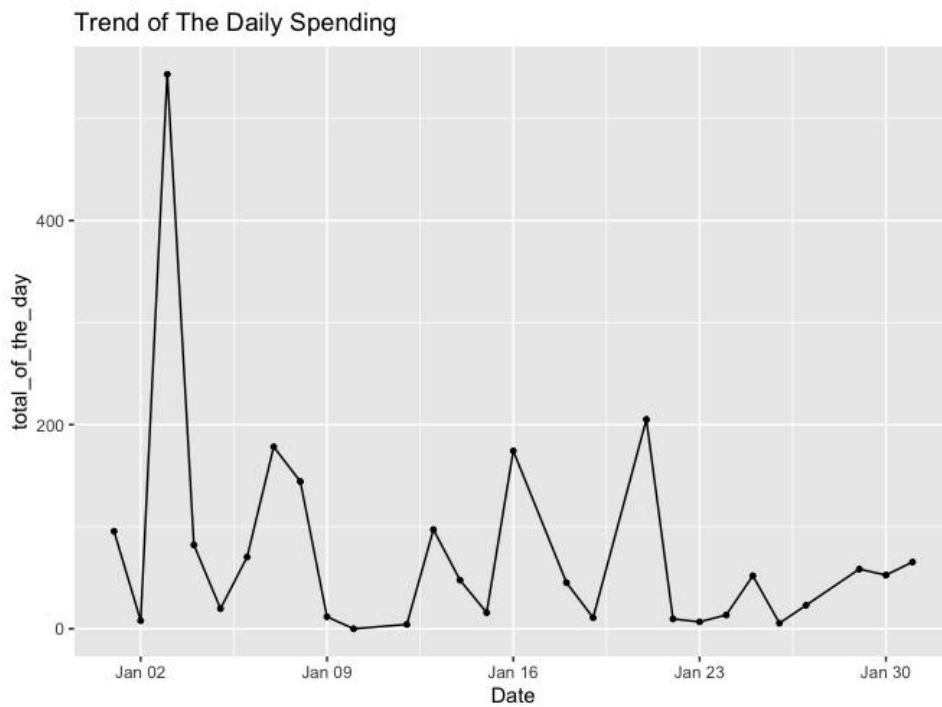
In this project, I gathered data from my personal banking statement in January 2023. As an international student currently has no income, I am interested in my spending pattern and habit. Therefore, I collect the data using excel, breaking my spending down into different categories (like food, transportation, education etc.), and I cleaned, removed, organized data by various function (such as trim,sum) in excel:

Date	food	uber	clothes & toys	grocery	entertainment	electronics	revenues	education	total_of_the_day
Jan 1	19.43	0	0	76.13	0	0	0	0	95.56
Jan 2	0	0	0	0	7.9	0	0	0	7.9
Jan 3	0	0	0	162.19	0	369.59	0	11.56	543.34
Jan 4	0	0	0	0	82.18	0	0	0	82.18
Jan 5	7.51	0	0	12.12	0	0	0	0	19.63
Jan 6	0	0	0	27.1	7.34	0	0	35.85	70.29
Jan 7	178.27	0	0	0	0	0	0	0	178.27
Jan 8	0	0	0	70.59	5.59	0	0	68.06	144.24
Jan 9	6.28	0	0	5.48	0	0	0	0	11.76
Jan 10	0	0	0	0	0	0	0	0	0
Jan 12	0	0	0	4.25	0	0	0	0	4.25
Jan 13	0	0	80.02	11.54	5.59	0	0	0	97.15
Jan 14	4	0	9.99	0	33.62	0	0	0	47.61
Jan 15	0	0	0	15.74	0	0	0	0	15.74
Jan 16	16.42	0	0	82.87	0	0	75	0	174.29
Jan 18	0	0	0	11.53	33.62	0	0	0	45.15
Jan 19	0	0	0	10.79	0	0	0	0	10.79
Jan 21	23.48	0	0	0	0	0	0	181.6	205.08
Jan 22	9.59	0	0	0	0	0	0	0	9.59
Jan 23	6.75	0	0	0	0	0	0	0	6.75
Jan 24	13.5	0	0	0	0	0	0	0	13.5
Jan 25	51.87	0	0	0	0	0	0	0	51.87
Jan 26	5.43	0	0	0	0	0	0	0	5.43
Jan 27	0	0	23.01	0	0	0	0	0	23.01
Jan 29	0	20.37	38.08	0	0	0	0	0	58.45
Jan 30	52.59	0	0	0	0	0	0	0	52.59
Jan 31	24.78	38.27	0	2.29	0	0	0	0	65.34
total_per_category	400.47	58.64	151.1	416.49	175.84	369.59	75	297.07	

After the data is ready for analysing, I used RStudio to present a pie chart and a line graph of my spending. In this process I applied different packages (such as tidyverse and ggplot) as a tool to present the visualization of my data:

**Distribution of The Total Spending**





Based on the pie chart, I gained an insight that most of my spending are towards food and grocery, but there is a lot of unnecessary dining out so that the proportion of the spending on food is close to grocery. There is a one-time purchase of a monitor that leads to a uncommon fluctuate in the line chart, and despite this, there's a pattern of a regular and steady flucuation of the spending from Jan 5 to Jan 23, which is a sign of a regular shopping for grocery. This gives an insight that through the line graph, I can see how regular is my routine and living habit. In conclusion, an improvement of my lifestyle can be implmented (such as decrease the frequency of dining out, and shop for grocery more regularly etc) based on the spending pattern. And I figured out how I can have a healthier life style.