Technical appendix:
Step 1: Load the survey responses CSV file LOAD CSV file containing survey responses
Step 2: Inspect the CSV file structure DISPLAY the first few rows and column names of the CSV file to understand its structure
Step 3: Extract and define the question mappings from the PDF DEFINE a dictionary that maps question codes (e.g., Q1, Q2_1) to their corresponding full question text
Step 4: Rename the columns in the CSV to reflect the full question text FOR each column in the CSV IF the column name matches a question code in the dictionary RENAME the column using the corresponding full question text from the dictionary
Step 5: Display the renamed DataFrame DISPLAY the first few rows of the renamed DataFrame to verify changes
Step 6: Handle missing data LEAVE missing data as NaN for now, to be decided how to handle later
Step 7: Save the cleaned and labeled data to a new CSV file SAVE the cleaned DataFrame as a new CSV file
End of Process RETURN the file path for the cleaned CSV file

1. Preferred voting method chart

**Initialize Excel and Load Data:**

- Open Excel.
- Load the cleaned survey data into a worksheet.

**For Each Correlation (Preferred Voting Method vs. Demographic Variable):**

- **Step 1:** Select the entire dataset (including headers).
- **Step 2:** Insert a Pivot Table.
  - Go to `Insert` > `Pivot Table`.
  - Choose to place the pivot table on a new worksheet.
- **Step 3:** Configure the Pivot Table:
  - **Rows:** Set the "Preferred method of voting this year" column as the row label.
  - **Columns:** Set the demographic variable (e.g., "Gender," "Education Level," "Voter Category," "Income") as the column label.
  - **Values:** Set the "Preferred method of voting this year" column in the Values area, using `COUNTA` to count the number of respondents for each voting method within each demographic group.

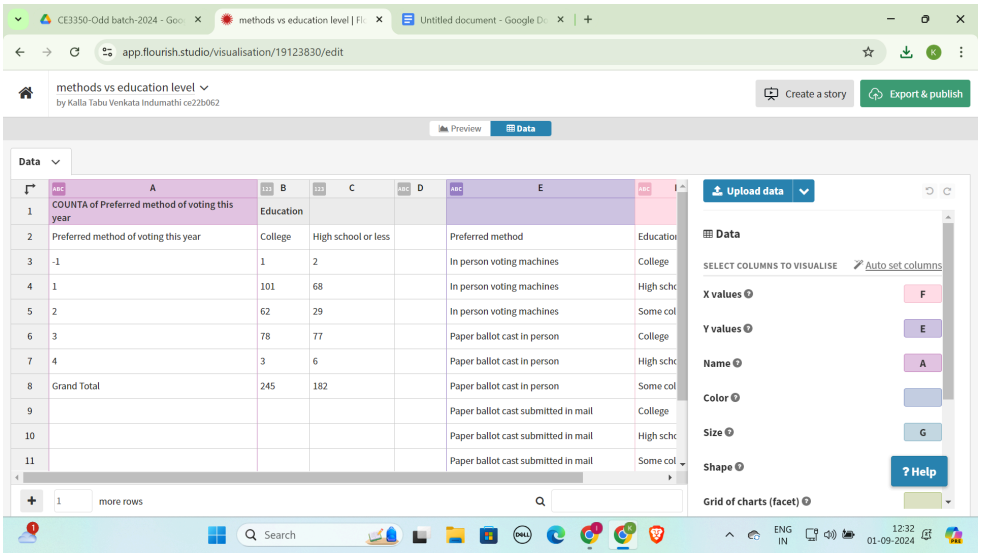
**Repeat Step 2 for Each Demographic Variable:**

- **Gender:** Create a pivot table correlating "Preferred method of voting this year" with "Gender."
- **Education Level:** Create a pivot table correlating "Preferred method of voting this year" with "Education Level."
- **Voter Category:** Create a pivot table correlating "Preferred method of voting this year" with "Voter Category."
- **Income:** Create a pivot table correlating "Preferred method of voting this year" with "Income."

**Save and Organize Results:**

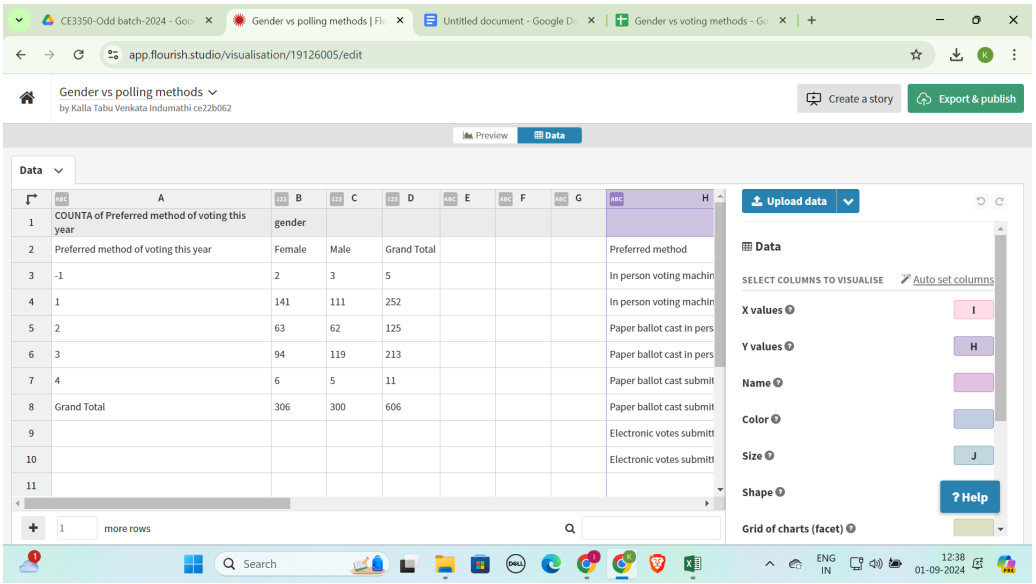
- Save the Excel file with the pivot tables on separate worksheets or organize them as needed.
- Analyze the pivot tables to identify patterns and correlations between the preferred voting method and each demographic variable.

Education vs preferred voting method

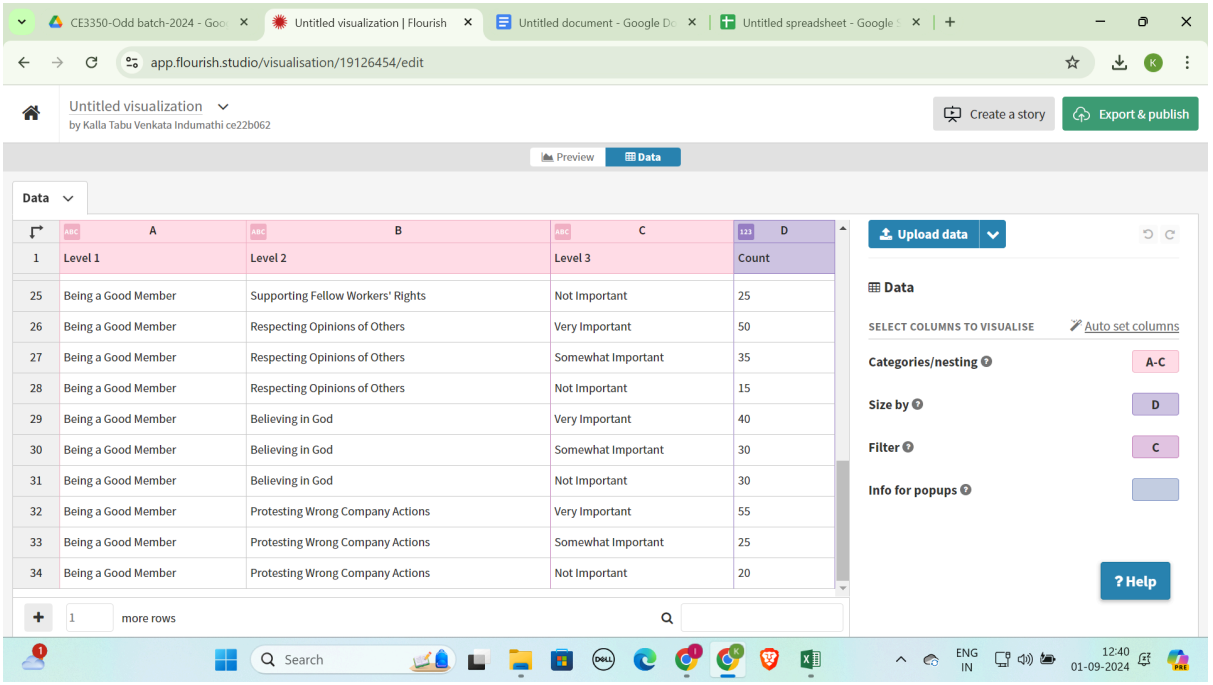



https://docs.google.com/spreadsheets/d/1Xv_4nhHKkJFmxtEJu-SjLBsfee6m7y4I8h9tPWjUP-4/edit?usp=sharing

Gender vs polling method:
https://docs.google.com/spreadsheets/d/1iKPiCyqwNOaPOVSY2oAQhGMWUF2LS88DrVP28cFJf7M/edit?usp=sharing



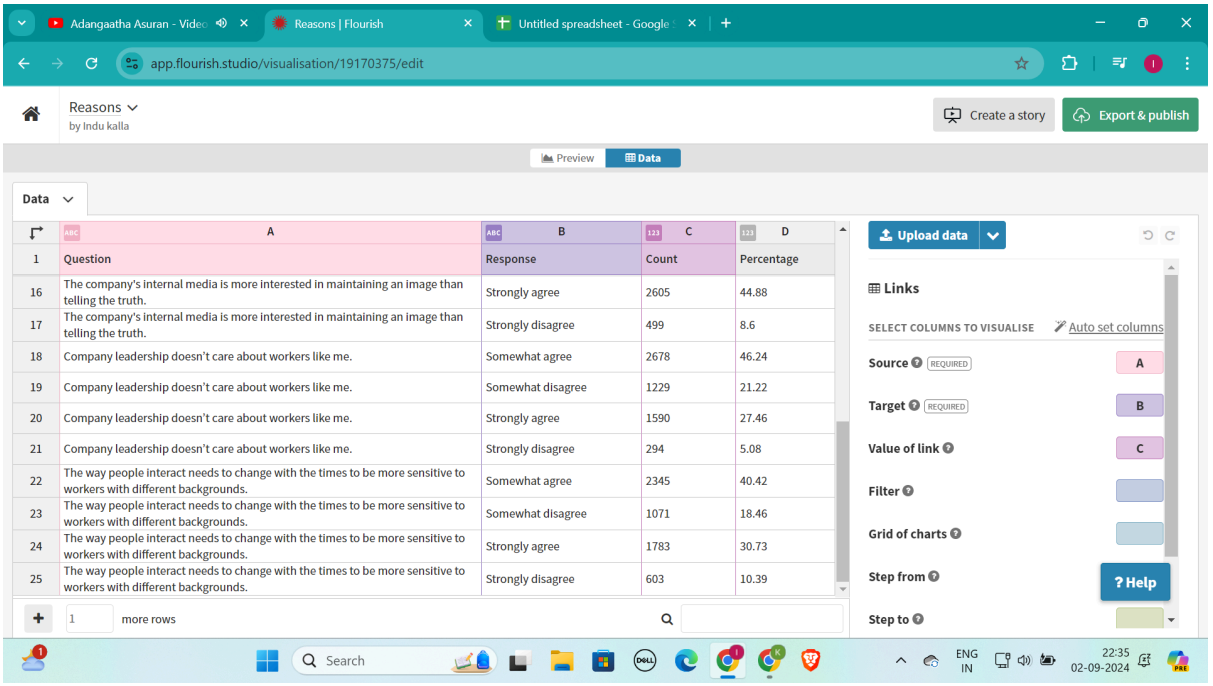
Sunburst chart:
https://docs.google.com/spreadsheets/d/1ONdgJtU0YbwY33KXE-PqTfBG3rwsF3ZatWEuMflivW8/edit?usp=sharing




| | A | B | C | D |
|---|---|---|---|---|
| 1 | Level 1 | Level 2 | Level 3 | Count |
| 25 | Being a Good Member | Supporting Fellow Workers' Rights | Not Important | 25 |
| 26 | Being a Good Member | Respecting Opinions of Others | Very Important | 50 |
| 27 | Being a Good Member | Respecting Opinions of Others | Somewhat Important | 35 |
| 28 | Being a Good Member | Respecting Opinions of Others | Not Important | 15 |
| 29 | Being a Good Member | Believing in God | Very Important | 40 |
| 30 | Being a Good Member | Believing in God | Somewhat Important | 30 |
| 31 | Being a Good Member | Believing in God | Not Important | 30 |
| 32 | Being a Good Member | Protesting Wrong Company Actions | Very Important | 55 |
| 33 | Being a Good Member | Protesting Wrong Company Actions | Somewhat Important | 25 |
| 34 | Being a Good Member | Protesting Wrong Company Actions | Not Important | 20 |

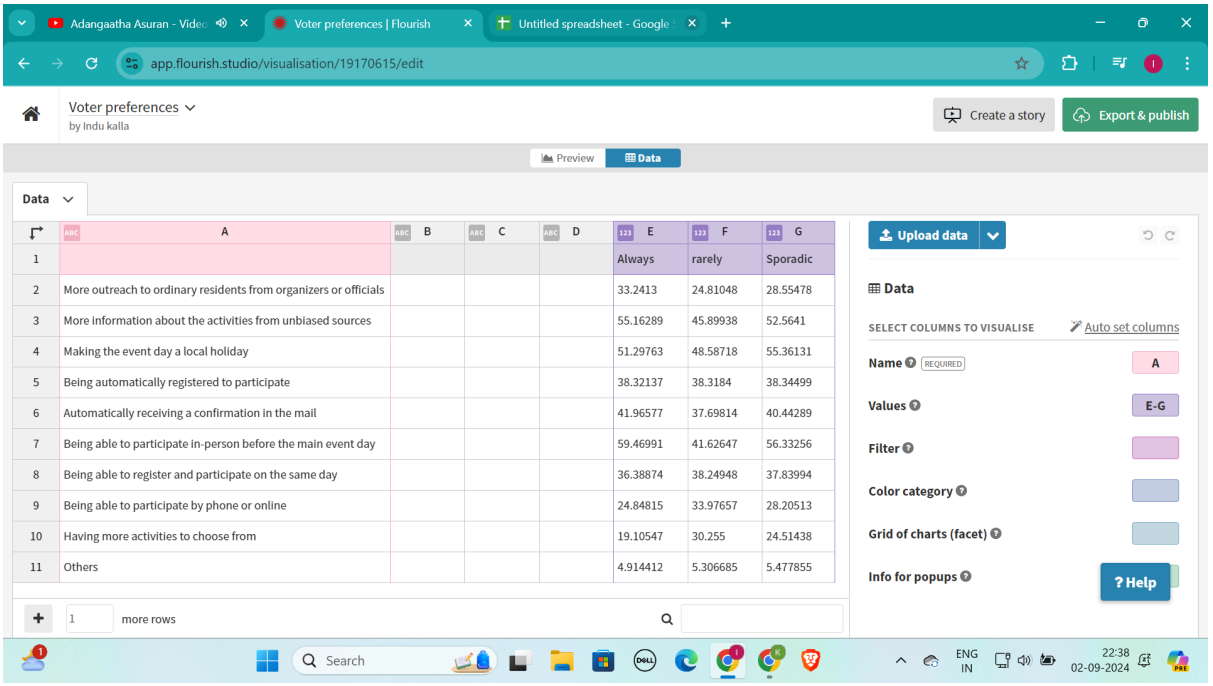
Alluvial chart:

https://docs.google.com/spreadsheets/d/1JxDyb1b9USChhVCLugruX4t2kWmYWc75WLo9ZXMDdR8/edit?usp=sharing




| | A | B | C | D |
|---|---|---|---|---|
| 1 | Question | Response | Count | Percentage |
| 16 | The company's internal media is more interested in maintaining an image than telling the truth. | Strongly agree | 2605 | 44.88 |
| 17 | The company's internal media is more interested in maintaining an image than telling the truth. | Strongly disagree | 499 | 8.6 |
| 18 | Company leadership doesn't care about workers like me. | Somewhat agree | 2678 | 46.24 |
| 19 | Company leadership doesn't care about workers like me. | Somewhat disagree | 1229 | 21.22 |
| 20 | Company leadership doesn't care about workers like me. | Strongly agree | 1590 | 27.46 |
| 21 | Company leadership doesn't care about workers like me. | Strongly disagree | 294 | 5.08 |
| 22 | The way people interact needs to change with the times to be more sensitive to workers with different backgrounds. | Somewhat agree | 2345 | 40.42 |
| 23 | The way people interact needs to change with the times to be more sensitive to workers with different backgrounds. | Somewhat disagree | 1071 | 18.46 |
| 24 | The way people interact needs to change with the times to be more sensitive to workers with different backgrounds. | Strongly agree | 1783 | 30.73 |
| 25 | The way people interact needs to change with the times to be more sensitive to workers with different backgrounds. | Strongly disagree | 603 | 10.39 |

Radial bar chart:
https://docs.google.com/spreadsheets/d/16cPbw2cA3KEHGSwOa3PULgXZvJZPzc0cFF5CwD8k7kc/edit?usp=sharing




| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | Always | rarely | Sporadic |
| 2 | More outreach to ordinary residents from organizers or officials | | | | 33.2413 | 24.81048 | 28.55478 |
| 3 | More information about the activities from unbiased sources | | | | 55.16289 | 45.89938 | 52.5641 |
| 4 | Making the event day a local holiday | | | | 51.29763 | 48.58718 | 55.36131 |
| 5 | Being automatically registered to participate | | | | 38.32137 | 38.3184 | 38.34499 |
| 6 | Automatically receiving a confirmation in the mail | | | | 41.96577 | 37.69814 | 40.44289 |
| 7 | Being able to participate in-person before the main event day | | | | 59.46991 | 41.62647 | 56.33256 |
| 8 | Being able to register and participate on the same day | | | | 36.38874 | 38.24948 | 37.83994 |
| 9 | Being able to participate by phone or online | | | | 24.84815 | 33.97657 | 28.20513 |
| 10 | Having more activities to choose from | | | | 19.10547 | 30.255 | 24.51438 |
| 11 | Others | | | | 4.914412 | 5.306685 | 5.477855 |