

```
In [155...]: import pandas as pd  
df_1 = pd.read_csv("Dataset Generation (2024) (Responses) - Form Responses 1.csv")  
df_2 = pd.read_csv("Dataset Generation (Fardina) (Responses) - Form Responses 1.csv")  
df_3 = pd.read_csv("Dataset Generation (Max) (Responses) - Form Responses 1 (1).csv")
```

```
In [3]: df_3.columns
```

Out[3]: Index(['Timestamp', 'What year are you?', 'How old are you?',
'You could describe the adults you grew up with as...',
'You could describe yourself as...',
'How would you rate your religiousness / spirituality?',
'What bests represents your gender?',
'My girlfriend is a doctor. Lately she's been complaining about pain in her right knee and constantly taking TONS of ibuprofen to treat (like 15-20 pills a day). However, it's only gotten worse. I've told her she needs to see someone about it but she told me it was fine. So I told her that if this is how she treats herself, I'd be concerned about being her patient. She was shocked and told me that was uncalled for. Am I a jerk?',

'My daughter is getting married soon. I only learned about her a few years ago. We've been building a relationship the last few years though and I am lucky to have her in my life now. Recently, she asked me to walk her down the aisle and while I am honored I told her no. Her step-dad practically raised her from a baby and I think that he deserves it far more than me. She was really upset and hurt when I said no. Am I a jerk?',

'I'm a trust fund kid; I get a healthy 'allowance' from my parents, but I mostly sock it away since I don't really feel like I deserve it. I live with my girlfriend, who comes from a poor family, and we split things 50-50. Recently, she found out how much money my parents send me each month and freaked out, saying it wasn't fair that I was making her split things 50/50. I told her it was my money, and it only seems fair if we cover half the expenses. Am I a jerk?',

'My wife and I have separate finances, but I pay for almost everything. My son starts school next year, and I'm planning on sending him to a private school. My wife's son currently goes to a much less nice public school. My wife says I'm a jerk for not paying for her daughter to go to private school as well.',

'I saw a poster for a lost cat advertising a 500 dollar reward. I saw the cat, tracked it down, and called the owner. When I met with them, they said there wasn't actually a reward, they had just listed one because they thought it would motivate people to find the cat. I kept the cat until they coughed up the reward money. Am I a jerk?',

'My sister's nine year old daughter is poorly behaved. One day, my sister dropped the daughter off on my doorstep without my consent and drove off, texting me that she needed me to watch her daughter for the day. The daughter complained of being hungry, so I gave her the leftovers I had. She said she didn't like them, but I told her that's all there was. She put them in the microwave until they burned, then told me she couldn't eat them and we would have to go out and get food. I told her that was what there was to eat, and if she ruined it she'd have to wait for her mom to get back. Later, everyone yelled at me for 'starving' a child. Am I a jerk?',

'My parents want us to come out for their anniversary, and bought my sister and I tickets on the same flight. My sister has two kids - a 6 month old and a 5 year old. She is currently separated from her husband so she would have to handle 2 children by herself on a 10 hour flight.\n\nShe calls me up a week or so beforehand and asks me if I will be willing to help her take care of her kids on the flight, and something about taking shifts so we can both sleep. I tell her that I wasn't comfortable with that, but she says "nephew loves you so much" so we can work something out on the flight and hangs up.\n\nWhen I got to the airport, I chose to upgrade my seat so I could sit by myself and didn't mention it until we were on the plane. My family freaked and told me I abandoned my sister. Am I a jerk?',

'I'm a single mom with four kids, one of whom has a different father from the other three. I get a lot of child support for one of them, and none for the other 3. 2/3rds of the child support for the eldest go towards his expenses and college fund. The other third goes towards my other children. My friend recently found out and told me it was inappropriate to use the child support intended for the one

on the other three. Am I a jerk?' ,

'I have a child with a mother who never wanted anything to do with them. I make enough money to cover my expenses, but I constantly check up on the child's mother to make sure she's paying adequate child support. Periodically I either hire an investigator or her mom just tells me she got a raise and I go to court to adjust the child support accordingly. The last time I did this, she didn't show up for court and I apparently overestimated how much her raise was and I got a default judgment. She called me up and practically pleaded with me to lower her payments after I said no she insulted me and my son. Am I a jerk?' ,

'One of my children wants to go to an expensive school to become a dentist. I told them I'd be fine paying for it. The other one wants to go to a similarly expensive school to become a teacher. I told her that I wouldn't pay for her schooling unless she picked a career path that will make at least 100,000 a year. Am I a jerk?' ,

'I was in a conflict with my mother-in-law's boyfriend, in which I made a snide comment about he's never paid child support to his ex. Later, he called me and told me if I ever said anything like that ever again he'd sue me for defamation. I took the threat seriously, as he is a lawyer, and uninvited him for our wedding and told my family I couldn't be around him anymore. Am I a jerk?' ,

'\nSome of my relatives refuse to come to my wedding, since they don't approve of our 'lifestyle'. I would like to donate the money I will save to an LGBTQ organization in their name. I'm hoping that I or the organization will be able to send them a receipt/thank you for the donation. Would I be a jerk?' ,

'My wife has decided that since she can't drink because she is pregnant that I can't either. I planned to take my annual leave from work to take us (and pay for) a trip abroad. I asked my wife would the drinking rule still be in effect and she said of course. I've now decided I won't be paying for us to take this trip. Am I a jerk?' ,

'My sister is going to be a bridesmaid at my wedding. Her hair was dyed, but she recently decided to grow it out, so parts of it are bleached and part are not. I told her it wouldn't look good in the pictures, and offered to pay for her to dye it. She said no, and I said she couldn't be in the wedding party. Am I a jerk?' ,

dtype='object')

In [4]: df_2.columns

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'You could describe the adults you grew up with as...',
'You could describe yourself as...',
'How would you rate your religiousness / spirituality?',
'What bests represents your gender?',
'Would you describe yourself as compassionate?',
'My girlfriend is a doctor. Lately she's been complaining about pain in her right knee and constantly taking TONS of ibuprofen to treat (like 15-20 pills a day). However, it's only gotten worse. I've told her she needs to see someone about it but she told me it was fine. So I told her that if this is how she treats herself, I'd be concerned about being her patient. She was shocked and told me that was uncalled for. Am I a jerk?',

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'My wife and I have separate finances, but I pay for almost everything. My son starts school next year, and I'm planning on sending him to a private school. My wife's son currently goes to a much less nice public school. My wife says I'm a jerk for not paying for her daughter to go to private school as well.'

'I saw a poster for a lost cat advertising a 500 dollar reward. I saw the cat, tracked it down, and called the owner. When I met with them, they said there wasn't actually a reward, they had just listed one because they thought it would motivate people to find the cat. I kept the cat until they coughed up the reward money. Am I a jerk?'

'My sister's nine year old daughter is poorly behaved. One day, my sister dropped the daughter off on my doorstep without my consent and drove off, texting me that she needed me to watch her daughter for the day. The daughter complained of being hungry, so I gave her the leftovers I had. She said she didn't like them, but I told her that's all there was. She put them in the microwave until they burned, then told me she couldn't eat them and we would have to go out and get food. I told her that was what there was to eat, and if she ruined it she'd have to wait for her mom to get back. Later, everyone yelled at me for 'starving' a child. Am I a jerk?'

'My parents want us to come out for their anniversary, and bought my sister and I tickets on the same flight. My sister has two kids - a 6 month old and a 5 year old. She is currently separated from her husband so she would have to handle 2 children by herself on a 10 hour flight.\n\nShe calls me up a week or so beforehand and asks me if I will be willing to help her take care of her kids on the flight, and something about taking shifts so we can both sleep. I tell her that I wasn't comfortable with that, but she says "nephew loves you so much" so we can work something out on the flight and hangs up.\n\nWhen I got to the airport, I chose to upgrade my seat so I could sit by myself and didn't mention it until we were on the plane. My family freaked and told me I abandoned my sister. Am I a jerk?'

'I'm a single mom with four kids, one of whom has a different father from the other three. I get a lot of child support for one of them, and none for the other 3. 2/3rds of the child support for the eldest go towards his expenses and college fund. The other third goes towards my other children. My friend recently found

out and told me it was inappropriate to use the child support intended for the one on the other three. Am I a jerk?',

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'I was in a conflict with my mother-in-law's boyfriend, in which I made a snide comment about he's never paid child support to his ex. Later, he called me and told me if I ever said anything like that ever again he'd sue me for defamation. I took the threat seriously, as he is a lawyer, and uninvited him for our wedding and told my family I couldn't be around him anymore. Am I a jerk?',

'\nSome of my relatives refuse to come to my wedding, since they don't approve of our 'lifestyle'. I would like to donate the money I will save to an LGBTQ organization in their name. I'm hoping that I or the organization will be able to send them a receipt/thank you for the donation. Would I be a jerk?',

'My wife has decided that since she can't drink because she is pregnant that I can't either. I planned to take my annual leave from work to take us (and pay for) a trip abroad. I asked my wife would the drinking rule still be in effect and she said of course. I've now decided I won't be paying for us to take this trip. Am I a jerk?',

'My sister is going to be a bridesmaid at my wedding. Her hair was dyed, but she recently decided to grow it out, so parts of it are bleached and part are not. I told her it wouldn't look good in the pictures, and offered to pay for her to dye it. She said no, and I said she couldn't be in the wedding party. Am I a jerk?'],

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        dtype='object')
```

In [5]: df_1.columns

Out[5]: Index(['Timestamp', 'What year are you?', 'How old are you?',
'You could describe the adults you grew up with as...',
'You could describe yourself as...',
'How would you rate your religiousness?',
'What bests represents your gender?',
'My boyfriend is a doctor. Lately he's been complaining about pain in his right knee and constantly taking TONS of ibuprofen to treat (like 15-20 pills a day). However, it's only gotten worse. I've told him he needs to see someone about it but he told me it was fine. So I told him that if this is how he treats herself, I'd be concerned about being his patient. He was shocked and told me that was uncalled for. Am I a jerk?',

'My son is getting married soon. Due to a complicated past, we've only just met recently. We've been building a relationship the last few years though and I am lucky to have him in my life now. Recently, he asked me to do a reading with his father while I am honored I told him no. His step-mother practically raised him from a baby and I think that she deserves it far more than me. He was really upset and hurt when I said no. Am I a jerk?',

'I'm a trust fund kid; I get a healthy 'allowance' from my parents, but I mostly sock it away since I don't really feel like I deserve it. I live with my boyfriend, who comes from a poor family, and we split things 50-50. Recently, he found out how much money my parents send me each month and freaked out, saying it wasn't fair that I was making him split things 50/50. I told him it was my money, and it only seems fair if we cover half the expenses. Am I a jerk?',

'My husband and I have separate finances, but I pay for almost everything. My son starts school next year, and I'm planning on sending him to a private school. My husband's son currently goes to a much less nice public school. My husband says I'm a jerk for not paying for his son to go to private school as well.',

'I saw a poster for a lost cat advertising a 500 dollar reward. I saw the cat, tracked it down, and called the owner. When I met with them, they said there wasn't actually a reward, they had just listed one because they thought it would motivate people to find the cat. I kept the cat until they coughed up the reward money. Am I a jerk?',

'My brother's nine year old son is poorly behaved. One day, my brother dropped the son off on my doorstep without my consent and drove off, texting me that he needed me to watch his son for the day. The son complained of being hungry, so I gave him the leftovers I had. He said he didn't like them, but I told him that's all there was. He put them in the microwave until they burned, then told me he couldn't eat them and we would have to go out and get food. I told him that was what there was to eat, and if he ruined it he'd have to wait for his dad to get back. Later, everyone yelled at me for 'starving' a child. Am I a jerk?',

'My parents want us to come out for their anniversary, and bought my brother and I tickets on the same flight. My brother has two kids - a 6 month old and a 5 year old. He is currently separated from his wife so he would have to handle 2 children by himself on a 10 hour flight.\n\nHe calls me up a week or so beforehand and asks me if I will be willing to help him take care of his kids on the flight, and something about taking shifts so we can both sleep. I tell him that I wasn't comfortable with that, but he says "nephew loves you so much" so we can work something out on the flight and hangs up.\n\nWhen I got to the airport, I chose to upgrade my seat so I could sit by myself and didn't mention it until we were on the plane. My family freaked and told me I abandoned my brother. Am I a jerk?',

'I'm a single dad with four kids, one of whom has a different mother from the other three. I get a lot of child support for one of them, and none for the other 3. 2/3rds of the child support for the eldest go towards his expenses and college fund. The other third goes towards my other children. My friend recently found out and told me it was inappropriate to use the child support intended for the one on the other three. Am I a jerk?',

'I have a child with a father who never wanted anything to do with them. I make enough money to cover my expenses, but I constantly check up on the child's father to make sure he's paying adequate child support. Periodically I either hire an investigator or her dad just tells me he got a raise and I go to court to adjust the child support accordingly. The last time I did this, he didn't show up for court and I apparently overestimated how much his raise was and I got a default judgment. He called me up and practically pleaded with me to lower his payments after I said no he insulted me and my son. Am I a jerk?',

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'I was in a conflict with my father-in-law's girlfriend, in which I made a snide comment about she's never paid child support to his ex. Later, she called me and told me if I ever said anything like that ever again she'd sue me for defamation. I took the threat seriously, as she is a lawyer, and uninvited him for our wedding and told my family I couldn't be around him anymore. Am I a jerk?',

'Some of my relatives refuse to come to my wedding, since they don't approve of our 'lifestyle'. I would like to donate the money I will save to an LGBTQ organization in their name. I'm hoping that I or the organization will be able to send them a receipt/thank you for the donation. Would I be a jerk?',

'My wife has decided that since she can't drink because she is pregnant that I can't either. I planned to take my annual leave from work to take us (and pay for) a trip abroad. I asked my wife would the drinking rule still be in effect and she said of course. I've now decided I won't be paying for us to take this trip. Am I a jerk?',

'My brother is going to be a groomsman at my wedding. His hair was dyed, but he recently decided to grow it out, so parts of it are bleached and part are not. I told him it wouldn't look good in the pictures, and offered to pay for him to dye it. He said no, and I said he couldn't be in the wedding party. Am I a jerk?'],

dtype='object')

```
In [156...]: # df_2.head(4)
df_2.drop('Would you describe yourself as compassionate?', axis=1, inplace=True)

In [157...]: df_1.columns = df_2.columns
df_3.columns = df_2.columns

In [8]: df_2["My girlfriend is a doctor. Lately she's been complaining about pain in her ri
Out[8]: array(['Strongly a jerk', 'Mildly a jerk', 'Not a jerk', nan],
           dtype=object)

In [158...]: combined_pd = pd.concat([df_1, df_2, df_3])
combined_pd.head()
```

Timestamp	What year are you?	How old are you?	You could describe the adults you grew up with as...	You could describe yourself as...	How would you rate your religiousness / spirituality?	What bests represents your gender?	girlfri a d Lately compli abou in hei kne cons 1 TC ibus to trea 15-20
15:20	How it's going	It's getting worse	I told him I need some time	He needs to take care of his son	She told him she's about to have a baby	So I told her that is how she is	herself
15:20	Concerning about her parents	She said she's sh	and that she's uncalled	Am I a	conc about her pa Sh sh and to tha uncalle Am I a		
15:20	Concerning about her parents	She said she's sh	and that she's uncalled	Am I a	conc about her pa Sh sh and to tha uncalle Am I a		
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0	9/17/2024 9:28:55	Junior	19.0	Mildly conservative	Strongly liberal	Somewhat religious	Male	Not
1	9/17/2024 9:29:12	Junior	19.0	Neutral	Mildly liberal	Strongly religious	Male	Not
2	9/17/2024 9:29:22	Sophomore	18.0	Don't know / It's complicated	Don't know / It's complicated	Not religious at all	Male	Not
3	9/17/2024 9:29:41	Senior	NaN	Neutral	Neutral	Somewhat religious	Female	Not
4	9/17/2024 9:30:06	Sophomore	19.0	Mildly liberal	Mildly liberal	Somewhat religious	Female	Not

5 rows × 21 columns

```
In [10]: len(combined_pd)
```

```
Out[10]: 380
```

```
In [ ]:
```

```
In [11]: question_list = list(combined_pd.columns[1:])
```

```
In [12]: question_list[0].split()
```

```
Out[12]: ['What', 'year', 'are', 'you?']
```

```
In [13]: ## keeping just first 5 words in column names
truncated_question_list = [" ".join(x.split()[:4]) for x in question_list]
dict_columns = {"Timestamp": "timestamp"}
```

```
In [14]: combined_pd.columns
```

Out[14]: Index(['Timestamp', 'What year are you?', 'How old are you?',
'You could describe the adults you grew up with as...',
'You could describe yourself as...',
'How would you rate your religiousness / spirituality?',
'What bests represents your gender?',
'My girlfriend is a doctor. Lately she's been complaining about pain in her right knee and constantly taking TONS of ibuprofen to treat (like 15-20 pills a day). However, it's only gotten worse. I've told her she needs to see someone about it but she told me it was fine. So I told her that if this is how she treats herself, I'd be concerned about being her patient. She was shocked and told me that was uncalled for. Am I a jerk?',

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dtype='object')

```
In [15]: dict_1 = {question_list[i]: truncated_question_list[i] for i in range(len(question_list))} dict_1["Timestamp"] = "timestamp" print(dict_1)
```

{ 'What year are you?': 'What year are you?', 'How old are you?': 'How old are you?', 'You could describe the adults you grew up with as...': 'You could describe the', 'You could describe yourself as...': 'You could describe yourself', 'How would you rate your religiousness / spirituality?': 'How would you rate', 'What bests represents your gender?': 'What bests represents your', "My girlfriend is a doctor. Lately she's been complaining about pain in her right knee and constantly taking TONS of ibuprofen to treat (like 15-20 pills a day). However, it's only gotten worse. I've told her she needs to see someone about it but she told me it was fine. So I told her that if this is how she treats herself, I'd be concerned about being her patient. She was shocked and told me that was uncalled for. Am I a jerk?": 'My girlfriend is a', "My daughter is getting married soon. I only learned about her a few years ago. We've been building a relationship the last few years though and I am lucky to have her in my life now. Recently, she asked me to walk her down the aisle and while I am honored I told her no. Her step-dad practically raised her from a baby and I think that he deserves it far more than me. She was really upset and hurt when I said no. Am I a jerk?": 'My daughter is getting', "I'm a trust fund kid; I get a healthy 'allowance' from my parents, but I mostly sock it away since I don't really feel like I deserve it. I live with my girlfriend, who comes from a poor family, and we split things 50-50. Recently, she found out how much money my parents send me each month and freaked out, saying it wasn't fair that I was making her split things 50/50. I told her it was my money, and it only seems fair if we cover half the expenses. Am I a jerk?": "I'm a trust fund", "My wife and I have separate finances, but I pay for almost everything. My son starts school next year, and I'm planning on sending him to a private school. My wife's son currently goes to a much less nice public school. My wife says I'm a jerk for not paying for her daughter to go to private school as well." : 'My wife and I', "I saw a poster for a lost cat advertising a 500 dollar reward. I saw the cat, tracked it down, and called the owner. When I met with them, they said there wasn't actually a reward, they had just listed one because they thought it would motivate people to find the cat. I kept the cat until they coughed up the reward money. Am I a jerk?": 'I saw a poster', "My sister's nine year old daughter is poorly behaved. One day, my sister dropped the daughter off on my doorstep without my consent and drove off, texting me that she needed me to watch her daughter for the day. The daughter complained of being hungry, so I gave her the leftovers I had. She said she didn't like them, but I told her that's all there was. She put them in the microwave until they burned, then told me she couldn't eat them and we would have to go out and get food. I told her that was what there was to eat, and if she ruined it she'd have to wait for her mom to get back. Later, everyone yelled at me for 'starving' a child. Am I a jerk?": "My sister's nine year", 'My parents want us to come out for their anniversary, and bought my sister and I tickets on the same flight. My sister has two kids - a 6 month old and a 5 year old. She is currently separated from her husband so she would have to handle 2 children by herself on a 10 hour flight.\n\nShe calls me up a week or so beforehand and asks me if I will be willing to help her take care of her kids on the flight, and something about taking shifts so we can both sleep. I tell her that I wasn't comfortable with that, but she says "nephew loves you so much" so we can work something out on the flight and hangs up.\n\nWhen I got to the airport, I chose to upgrade my seat so I could sit by myself and didn't mention it until we were on the plane. My family freaked and told me I abandoned my sister. Am I a jerk?": 'My parents want us', "I'm a single mom with four kids, one of whom has a different father from the other three. I get a lot of child support for one of them, and none for the other 3. 2/3rds of the child support for the eldest goes towards his expenses and college fund. The other third goes towards my other children. My friend recently found out and told me it was inappropriate to use the child support intended for the one on the other three. Am I a jerk?": "I'm a single mom", "I have a child with a mother who never wanted anything to do with them. I make enough money to cover my expenses, but I constantly check up on the child's mother to make sure she's paying adequate child support. Periodically I either hire an investigator

or her mom just tells me she got a raise and I go to court to adjust the child support accordingly. The last time I did this, she didn't show up for court and I apparently overestimated how much her raise was and I got a default judgment. She called me up and practically pleaded with me to lower her payments after I said no she insulted me and my son. Am I a jerk?": 'I have a child', "One of my children wants to go to an expensive school to become a dentist. I told them I'd be fine paying for it. The other one wants to go to a similarly expensive school to become a teacher. I told her that I wouldn't pay for her schooling unless she picked a career path that will make at least 100,000 a year. Am I a jerk?": 'One of my children', "I was in a conflict with my mother-in-law's boyfriend, in which I made a snide comment about he's never paid child support to his ex. Later, he called me and told me if I ever said anything like that ever again he'd sue me for defamation. I took the threat seriously, as he is a lawyer, and uninvited him for our wedding and told my family I couldn't be around him anymore. Am I a jerk?": 'I was in a', "\nSome of my relatives refuse to come to my wedding, since they don't approve of our 'lifestyle'. I would like to donate the money I will save to an LGBTQ organization in their name. I'm hoping that I or the organization will be able to send them a receipt/thank you for the donation. Would I be a jerk?": 'Some of my relatives', 'My wife has decided that since she can't drink because she is pregnant that I can't either. I planned to take my annual leave from work to take us (and pay for) a trip abroad. I asked my wife would the drinking rule still be in effect and she said of course. I've now decided I won't be paying for us to take this trip. Am I jerk?": 'My wife has decided', "My sister is going to be a bridesmaid at my wedding. Her hair was dyed, but she recently decided to grow it out, so parts of it are bleached and part are not. I told her it wouldn't look good in the pictures, and offered to pay for her to dye it. She said no, and I said she couldn't be in the wedding party. Am I a jerk?": 'My sister is going', 'Timestamp': 'timestamp'}

```
In [16]: ## renaming columns  
combined_pd = combined_pd.rename(columns=dict_1)
```

```
In [17]: combined_pd.head(5)
```

```
Out[17]:
```

	timestamp	What year are you?	How old are you?	You could describe the	You could describe yourself	How would you rate	What bests represents your	My girlfriend is a
0	9/17/2024 9:28:55	Junior	19.0	Mildly conservative	Strongly liberal	Somewhat religious	Male	Not a jerk
1	9/17/2024 9:29:12	Junior	19.0	Neutral	Mildly liberal	Strongly religious	Male	Not a jerk
2	9/17/2024 9:29:22	Sophomore	18.0	Don't know / It's complicated	Don't know / It's complicated	Not religious at all	Male	Not a jerk
3	9/17/2024 9:29:41	Senior	NaN	Neutral	Neutral	Somewhat religious	Female	Not a jerk
4	9/17/2024 9:30:06	Sophomore	19.0	Mildly liberal	Mildly liberal	Somewhat religious	Female	Not a jerk

5 rows × 21 columns

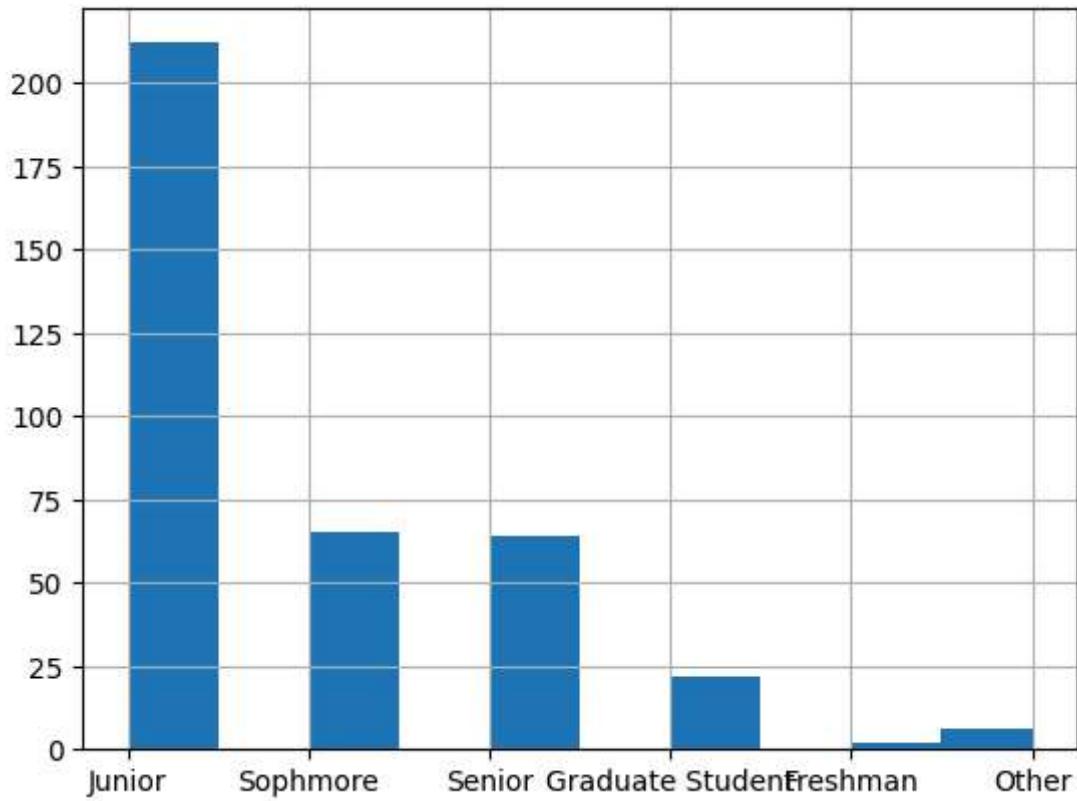


```
In [18]: combined_pd.columns
```

```
Out[18]: Index(['timestamp', 'What year are you?', 'How old are you?',  
       'You could describe the', 'You could describe yourself',  
       'How would you rate', 'What bests represents your',  
       'My girlfriend is a', 'My daughter is getting', 'I'm a trust fund',  
       'My wife and I', 'I saw a poster', 'My sister's nine year',  
       'My parents want us', 'I'm a single mom', 'I have a child',  
       'One of my children', 'I was in a', 'Some of my relatives',  
       'My wife has decided', 'My sister is going'],  
      dtype='object')
```

```
In [19]: combined_pd['What year are you?'].hist()
```

```
Out[19]: <Axes: >
```



This implies the professor collecting the data mostly teaches juniors

```
In [20]: combined_pd.to_csv("combined.csv")
```

```
In [21]: ## Lets find out number of null values in each columns
for i in combined_pd.columns:
    print(f"null in {i} ::", combined_pd[i].isna().sum())
```

```
null in timestamp :: 0
null in What year are you? :: 9
null in How old are you? :: 11
null in You could describe the :: 10
null in You could describe yourself :: 11
null in How would you rate :: 11
null in What bests represents your :: 11
null in My girlfriend is a :: 11
null in My daughter is getting :: 12
null in I'm a trust fund :: 13
null in My wife and I :: 16
null in I saw a poster :: 13
null in My sister's nine year :: 14
null in My parents want us :: 16
null in I'm a single mom :: 18
null in I have a child :: 20
null in One of my children :: 15
null in I was in a :: 18
null in Some of my relatives :: 18
null in My wife has decided :: 17
null in My sister is going :: 16
```

```
In [22]: def check_convertibility(value):
    try:
        # Attempt to convert to int
        int(value)
        return True
    except (ValueError, TypeError):
        return False
```

```
In [23]: combined_pd[~combined_pd["How old are you?"].apply(lambda x: check_convertibility(x))]
combined_pd["How old are you?"] = combined_pd["How old are you?"].str.replace("", "\\\n")
```

```
In [24]: combined_pd[~combined_pd["How old are you?"].apply(lambda x: check_convertibility(x))]
```

Out[24]:

	timestamp	What year are you?	How old are you?	You could describe the	You could describe yourself	How would you rate	What bests represents your	girl
0	9/17/2024 9:28:55	Junior	NaN	Mildly conservative	Strongly liberal	Somewhat religious	Male	No
1	9/17/2024 9:29:12	Junior	NaN	Neutral	Mildly liberal	Strongly religious	Male	No
2	9/17/2024 9:29:22	Sophmore	NaN	Don't know / It's complicated	Don't know / It's complicated	Not religious at all	Male	No
3	9/17/2024 9:29:41	Senior	NaN	Neutral	Neutral	Somewhat religious	Female	No
4	9/17/2024 9:30:06	Sophmore	NaN	Mildly liberal	Mildly liberal	Somewhat religious	Female	No
...
98	10/24/2023 19:08:45	Junior	\+2\+0\+	Mildly conservative	Neutral	Strongly spiritual	Female	No
99	10/26/2023 2:30:15	Junior	\+2\+0\+	Mildly liberal	Strongly liberal	Somewhat spiritual	Male	No
100	10/26/2023 21:23:25	Junior	\+2\+1\+	Mildly liberal	Mildly liberal	Not spiritual at all	Female	N
101	10/26/2023 22:14:39	NaN	NaN	NaN	NaN	NaN	NaN	NaN
102	10/27/2023 1:04:27	NaN	NaN	NaN	NaN	NaN	NaN	NaN

380 rows × 21 columns



```
In [25]: combined_pd.dropna(inplace=True)
```

```
In [26]: # Lets see data of students who are more than 30 years of age  
combined_pd[combined_pd["How old are you?"].apply(lambda x: isinstance(x,str))]
```

Out[26]:

	timestamp	What year are you?	How old are you?	You could describe the	You could describe yourself	How would you rate	What bests represents your	girlfrie
0	9/23/2023 18:01:01	Junior	\+2\+0\+	Mildly conservative	Mildly conservative	Not spiritual at all	Male	Strongly j
1	9/23/2023 18:01:08	Junior	\+2\+0\+	Mildly liberal	Mildly liberal	Not spiritual at all	Male	Mildly j
2	9/23/2023 18:08:57	Junior	\+2\+0\+	Mildly conservative	Mildly conservative	Somewhat spiritual	Male	Not a j
3	9/23/2023 18:09:57	Senior	\+2\+2\+	Mildly liberal	Mildly liberal	Not spiritual at all	Female	Mildly j
5	9/23/2023 18:10:13	Other	\+2\+5\+	Mildly conservative	Mildly conservative	Not spiritual at all	Male	Mildly j
...
93	10/12/2023 15:52:02	Junior	\+1\+9\+	Strongly liberal	Strongly conservative	Not spiritual at all	Female	Not a j
95	10/17/2023 1:47:30	Junior	\+2\+0\+	Strongly conservative	Mildly conservative	Somewhat spiritual	Male	Mildly j
98	10/24/2023 19:08:45	Junior	\+2\+0\+	Mildly conservative	Neutral	Strongly spiritual	Female	Not a j
99	10/26/2023 2:30:15	Junior	\+2\+0\+	Mildly liberal	Strongly liberal	Somewhat spiritual	Male	Not a j
100	10/26/2023 21:23:25	Junior	\+2\+1\+	Mildly liberal	Mildly liberal	Not spiritual at all	Female	Mildly j

216 rows × 21 columns



```
In [27]: ## Lets find out number of null values in each columns
```

```
for i in combined_pd.columns:  
    print(f"null in {i} ::", combined_pd[i].isna().sum())
```

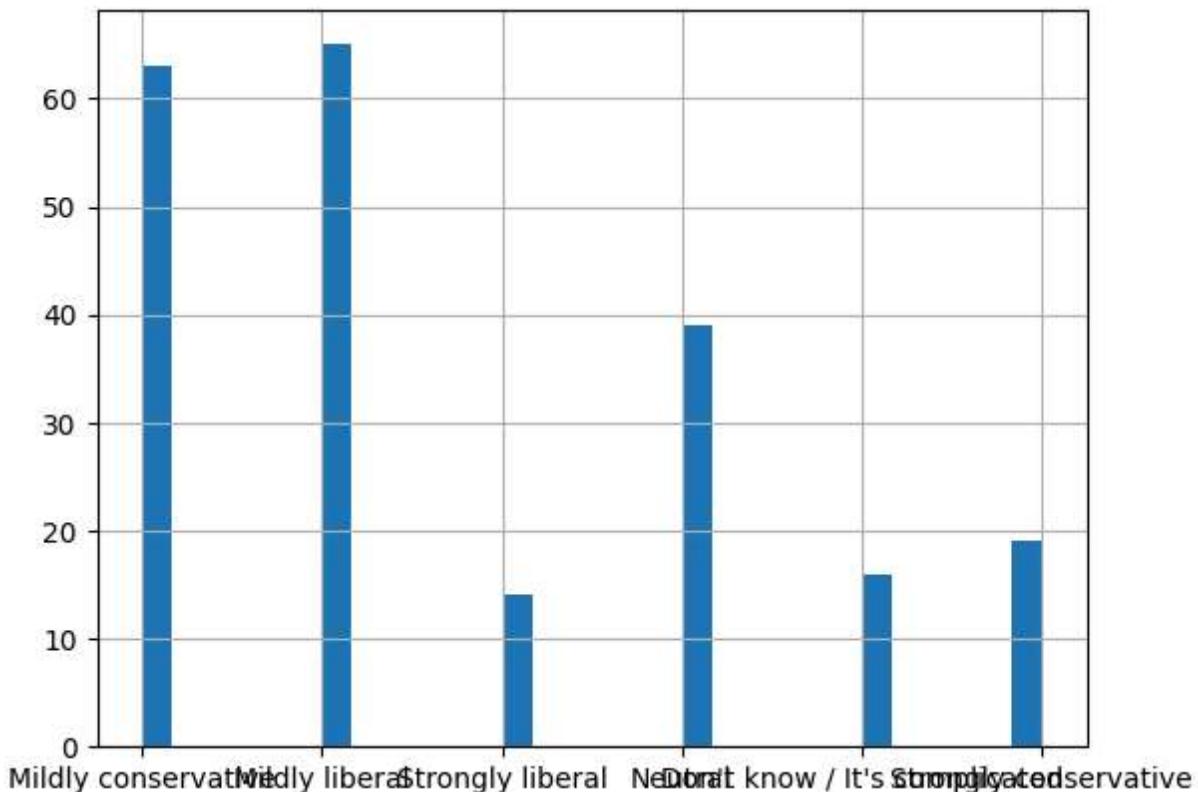
```
null in timestamp :: 0
null in What year are you? :: 0
null in How old are you? :: 0
null in You could describe the :: 0
null in You could describe yourself :: 0
null in How would you rate :: 0
null in What bests represents your :: 0
null in My girlfriend is a :: 0
null in My daughter is getting :: 0
null in I'm a trust fund :: 0
null in My wife and I :: 0
null in I saw a poster :: 0
null in My sister's nine year :: 0
null in My parents want us :: 0
null in I'm a single mom :: 0
null in I have a child :: 0
null in One of my children :: 0
null in I was in a :: 0
null in Some of my relatives :: 0
null in My wife has decided :: 0
null in My sister is going :: 0
```

we can say that most students are below 30 years of age

In []:

In [28]: `combined_pd["You could describe the"].hist(bins=30)`

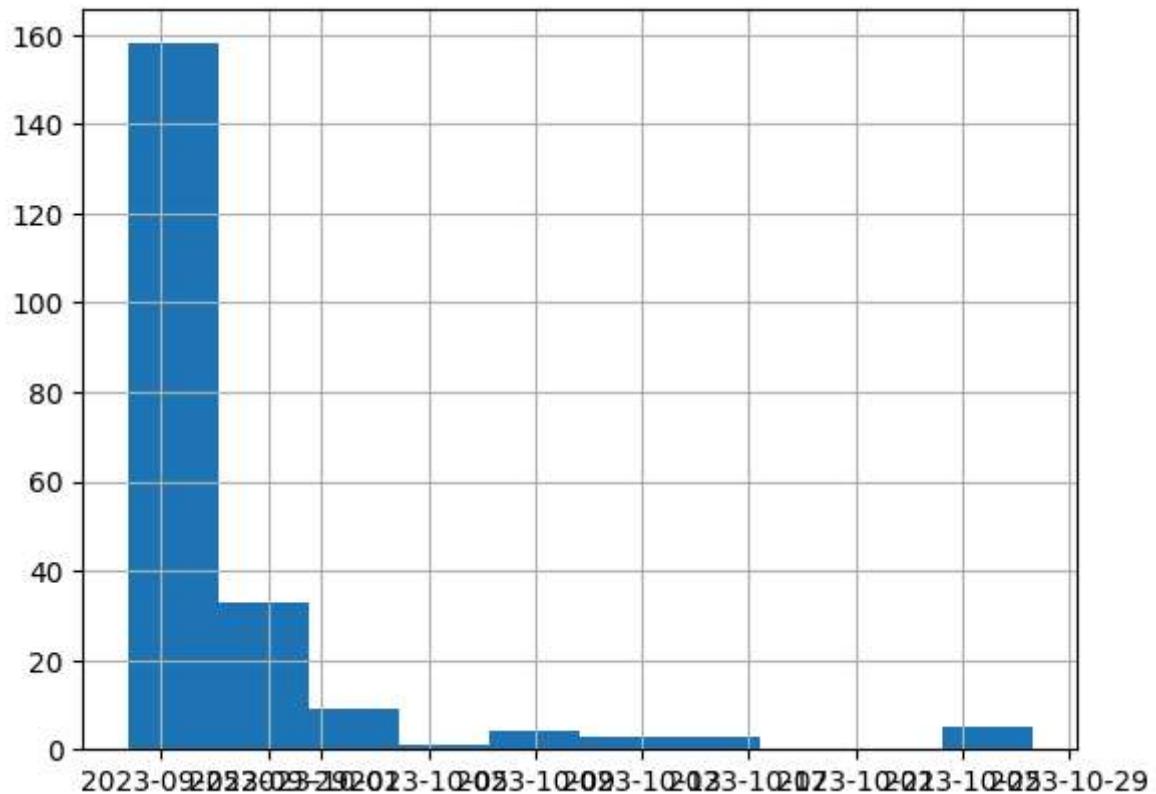
Out[28]: <Axes: >



```
In [29]: combined_pd['Datetime'] = pd.to_datetime(combined_pd['timestamp'])
```

```
In [30]: combined_pd['Datetime'].hist()
```

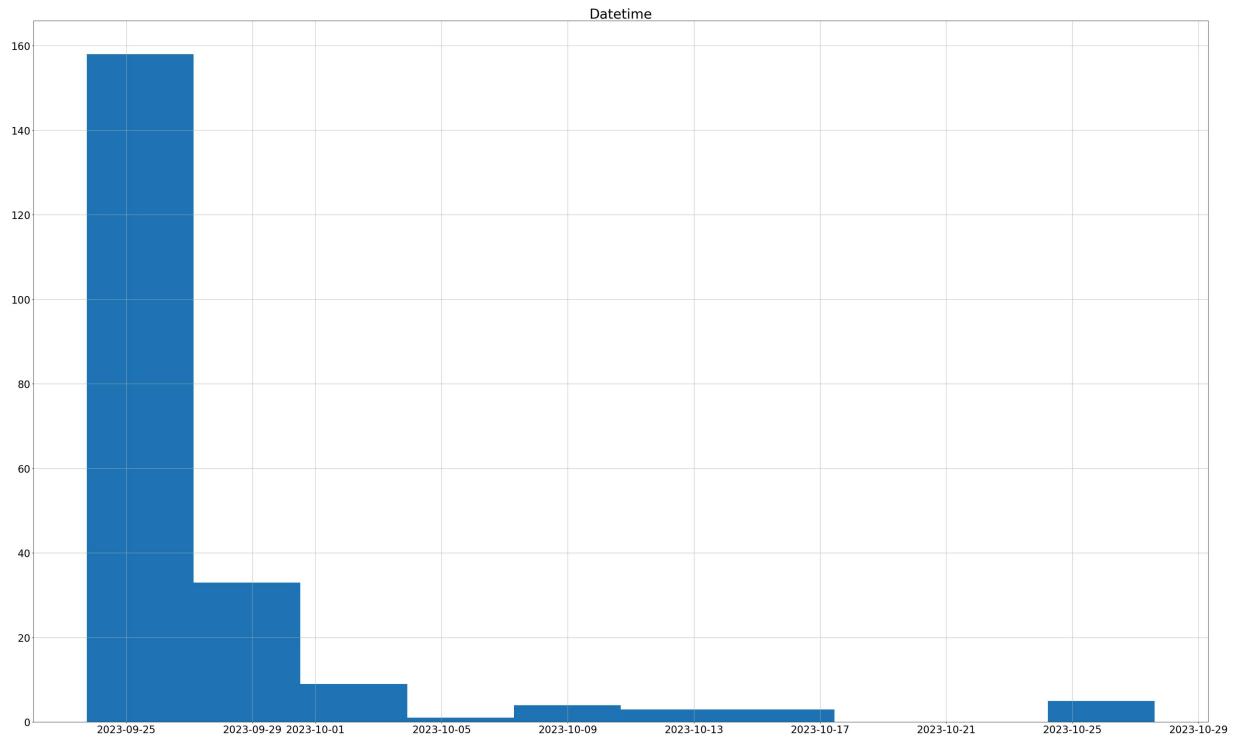
```
Out[30]: <Axes: >
```



```
In [31]: import matplotlib
```

```
params = {'axes.titlesize':'32',
          'xtick.labelsize':'24',
          'ytick.labelsize':'24'}
matplotlib.rcParams.update(params)
combined_pd.hist(figsize=(50, 30))
```

```
Out[31]: array([[<Axes: title={'center': 'Datetime'}>]], dtype=object)
```

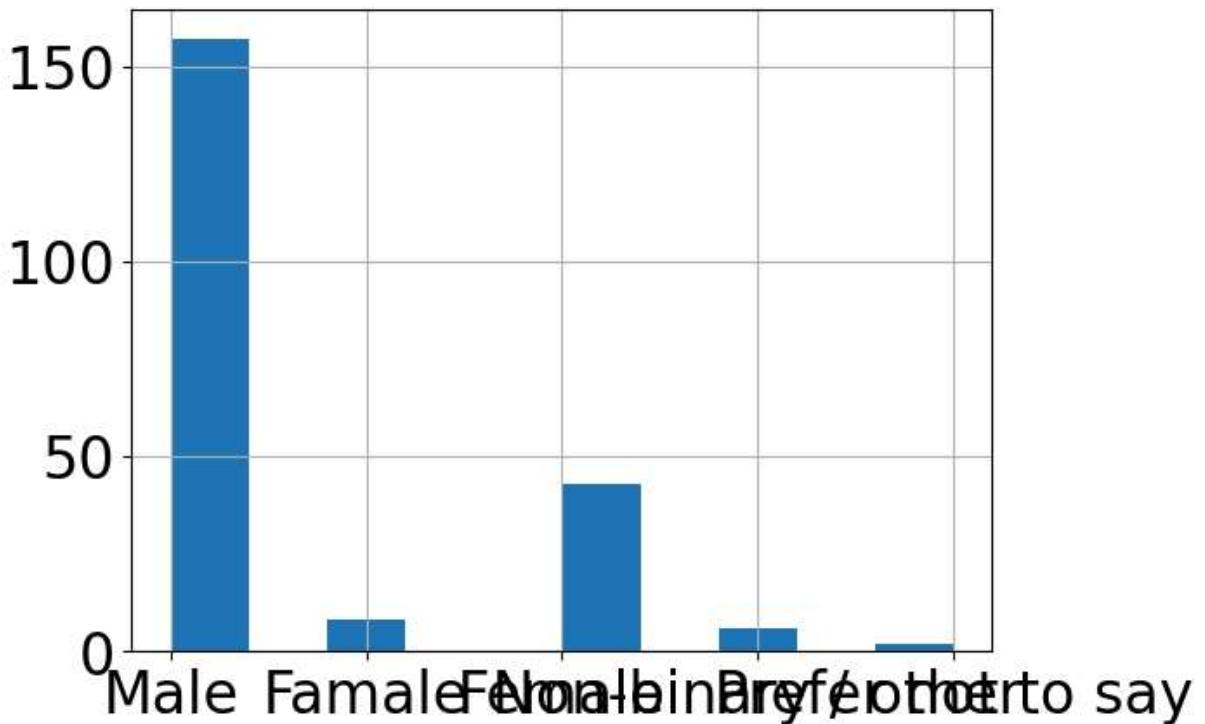


```
In [32]: combined_pd.columns
```

```
Out[32]: Index(['timestamp', 'What year are you?', 'How old are you?',
       'You could describe the', 'You could describe yourself',
       'How would you rate', 'What bests represents your',
       'My girlfriend is a', 'My daughter is getting', 'I'm a trust fund',
       'My wife and I', 'I saw a poster', 'My sister's nine year',
       'My parents want us', 'I'm a single mom', 'I have a child',
       'One of my children', 'I was in a', 'Some of my relatives',
       'My wife has decided', 'My sister is going', 'Datetime'],
      dtype='object')
```

```
In [33]: combined_pd['What bests represents your'].hist()
```

```
Out[33]: <Axes: >
```



There are more males in class compared to females

```
In [34]: ## Lets find out number of null values in each columns
for i in combined_pd.columns:
    print(f"null in {i} :::", combined_pd[i].isna().sum())
```

```
null in timestamp :: 0
null in What year are you? :: 0
null in How old are you? :: 0
null in You could describe the :: 0
null in You could describe yourself :: 0
null in How would you rate :: 0
null in What bests represents your :: 0
null in My girlfriend is a :: 0
null in My daughter is getting :: 0
null in I'm a trust fund :: 0
null in My wife and I :: 0
null in I saw a poster :: 0
null in My sister's nine year :: 0
null in My parents want us :: 0
null in I'm a single mom :: 0
null in I have a child :: 0
null in One of my children :: 0
null in I was in a :: 0
null in Some of my relatives :: 0
null in My wife has decided :: 0
null in My sister is going :: 0
null in Datetime :: 0
```

```
In [35]: ## as there are very less number of null values we can remove them
combined_pd.dropna(inplace=True)
```

```
In [36]: combined_pd.shape
```

```
Out[36]: (216, 22)
```

so only 6 rows are dropped

```
In [37]: combined_pd["My boyfriend is a"].unique()
```

```
-----  
KeyError                                         Traceback (most recent call last)  
File ~\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11_qbz5n2kfra8p0\Loc  
alCache\local-packages\Python311\site-packages\pandas\core\indexes\base.py:3805, in  
Index.get_loc(self, key)  
    3804     try:  
-> 3805         return self._engine.get_loc(casted_key)  
3806     except KeyError as err:  
  
File index.pyx:167, in pandas._libs.index.IndexEngine.get_loc()  
  
File index.pyx:196, in pandas._libs.index.IndexEngine.get_loc()  
  
File pandas\\_libs\\hashtable_class_helper.pxi:7081, in pandas._libs.hashtable.PyObj  
ectHashTable.get_item()  
  
File pandas\\_libs\\hashtable_class_helper.pxi:7089, in pandas._libs.hashtable.PyObj  
ectHashTable.get_item()  
  
KeyError: 'My boyfriend is a'  
  
The above exception was the direct cause of the following exception:  
  
KeyError                                         Traceback (most recent call last)  
Cell In[37], line 1  
----> 1 combined_pd["My boyfriend is a"].unique()  
  
File ~\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11_qbz5n2kfra8p0\Loc  
alCache\local-packages\Python311\site-packages\pandas\core\frame.py:4102, in DataFra  
me.__getitem__(self, key)  
    4100     if self.columns.nlevels > 1:  
    4101         return self._getitem_multilevel(key)  
-> 4102     indexer = self.columns.get_loc(key)  
    4103     if is_integer(indexer):  
    4104         indexer = [indexer]  
  
File ~\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11_qbz5n2kfra8p0\Loc  
alCache\local-packages\Python311\site-packages\pandas\core\indexes\base.py:3812, in  
Index.get_loc(self, key)  
    3807     if isinstance(casted_key, slice) or (  
    3808         isinstance(casted_key, abc.Iterable)  
    3809         and any(isinstance(x, slice) for x in casted_key)  
    3810     ):  
    3811         raise InvalidIndexError(key)  
-> 3812     raise KeyError(key) from err  
3813 except TypeError:  
    3814     # If we have a listlike key, _check_indexing_error will raise  
    3815     # InvalidIndexError. Otherwise we fall through and re-raise  
    3816     # the TypeError.  
    3817     self._check_indexing_error(key)  
  
KeyError: 'My boyfriend is a'
```

In [235]:
now lets replace "not a jerk", "mildly jerk", "strongly jerk" values with number
for i in combined_pd.columns[7:21]:

```
print(f"unique values in {i} columns",combined_pd[i].unique())

unique values in My girlfriend is a columns ['Strongly a jerk' 'Mildly a jerk' 'Not a jerk']
unique values in My daughter is getting columns ['Mildly a jerk' 'Not a jerk' 'Strongly a jerk']
unique values in I'm a trust fund columns ['Strongly a jerk' 'Mildly a jerk' 'Not a jerk']
unique values in My wife and I columns ['Not a jerk' 'Mildly a jerk' 'Strongly a jerk']
unique values in I saw a poster columns ['Mildly a jerk' 'Not a jerk' 'Strongly a jerk']
unique values in My sister's nine year columns ['Mildly a jerk' 'Not a jerk' 'Strongly a jerk']
unique values in My parents want us columns ['Mildly a jerk' 'Strongly a jerk' 'Not a jerk']
unique values in I'm a single mom columns ['Not a jerk' 'Mildly a jerk' 'Strongly a jerk']
unique values in I have a child columns ['Not a jerk' 'Strongly a jerk' 'Mildly a jerk']
unique values in One of my children columns ['Strongly a jerk' 'Mildly a jerk' 'Not a jerk']
unique values in I was in a columns ['Not a jerk' 'Mildly a jerk' 'Strongly a jerk']
unique values in Some of my relatives columns ['Not a jerk' 'Mildly a jerk' 'Strongly a jerk']
unique values in My wife has decided columns ['Strongly a jerk' 'Not a jerk' 'Mildly a jerk']
unique values in My sister is going columns ['Mildly a jerk' 'Not a jerk' 'Strongly a jerk']
```

```
In [38]: ## now lets replace "not a jerk", "mildly jerk", "strongly jerk" values with number
for i in combined_pd.columns[7:21]:
    combined_pd[i] = combined_pd[i].map({"Not a jerk":1,"Mildly a jerk":2,"Strongly a jerk":3})
```

```
In [39]: for i in combined_pd.columns[7:21]:
    print(f"unique values in {i} columns",combined_pd[i].unique())
```

```
unique values in My girlfriend is a columns [3 2 1]
unique values in My daughter is getting columns [2 1 3]
unique values in I'm a trust fund columns [3 2 1]
unique values in My wife and I columns [1 2 3]
unique values in I saw a poster columns [2 1 3]
unique values in My sister's nine year columns [2 1 3]
unique values in My parents want us columns [2 3 1]
unique values in I'm a single mom columns [1 2 3]
unique values in I have a child columns [1 3 2]
unique values in One of my children columns [3 2 1]
unique values in I was in a columns [1 2 3]
unique values in Some of my relatives columns [1 2 3]
unique values in My wife has decided columns [3 1 2]
unique values in My sister is going columns [2 1 3]
```

```
In [40]: ## I wanna know distribution of genders in numbers
combined_pd["What bests represents your"].value_counts()
```

```
Out[40]: What bests represents your  
Male           157  
Female          43  
Famale          8  
Non-binary / other    6  
Prefer not to say     2  
Name: count, dtype: int64
```

```
In [41]: ## we would be focusing on males and females for now  
combined_pd = combined_pd[combined_pd["What bests represents your"].isin(["Male", "F
```

```
In [42]: ! pip install plotly
```

```
Requirement already satisfied: plotly in c:\users\shyam\appdata\local\packages\pythonsoftwarefoundation.python.3.11_qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (5.24.1)  
Requirement already satisfied: tenacity>=6.2.0 in c:\users\shyam\appdata\local\packages\pythonsoftwarefoundation.python.3.11_qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from plotly) (9.0.0)  
Requirement already satisfied: packaging in c:\users\shyam\appdata\local\packages\pythonsoftwarefoundation.python.3.11_qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from plotly) (23.2)
```

```
In [43]: combined_pd.columns
```

```
Out[43]: Index(['timestamp', 'What year are you?', 'How old are you?',  
               'You could describe the', 'You could describe yourself',  
               'How would you rate', 'What bests represents your',  
               'My girlfriend is a', 'My daughter is getting', 'I\'m a trust fund',  
               'My wife and I', 'I saw a poster', 'My sister\'s nine year',  
               'My parents want us', 'I\'m a single mom', 'I have a child',  
               'One of my children', 'I was in a', 'Some of my relatives',  
               'My wife has decided', 'My sister is going', 'Datetime'],  
              dtype='object')
```

```
In [44]: import plotly.express as px  
import pandas as pd
```

```
df_group_gender = combined_pd.groupby(["How would you rate", "My boyfriend is a"]).size()  
# total_counts = df_group_gender.groupby("How would you rate")["counts"].transform("sum")  
fig = px.bar(df_group_gender, x = "My boyfriend is a", y = "counts", color="How would you rate")  
  
# df_group_gender["percentage"] = df_group_gender["counts"] / total_counts * 100  
# # Add annotations for percentages  
# for index, row in df_group_gender.iterrows():  
#     fig.add_annotation(  
#         x=row["My boyfriend is a"],  
#         y=row["counts"],  
#         text=f"{row['percentage']:.1f}%",  
#         showarrow=False,  
#         font=dict(size=12),  
#         yshift=10 # Shift the annotation upwards  
#     )
```

```
# Show the plot  
fig.show()
```

```
-----  
KeyError Traceback (most recent call last)  
Cell In[44], line 6  
      1 import plotly.express as px  
      2 import pandas as pd  
----> 6 df_group_gender = combined_pd.groupby(["How would you rate","My boyfriend is  
a"]).size().reset_index(name="counts")  
      7 # total_counts = df_group_gender.groupby("How would you rate")["counts"].tra  
nsform()  
      8 fig = px.bar(df_group_gender, x = "My boyfriend is a", y = "counts", color  
="How would you rate", barmode="group")  
  
File ~\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11_qbz5n2kfra8p0\Loc  
alCache\local-packages\Python311\site-packages\pandas\core\frame.py:9183, in DataFra  
me.groupby(self, by, axis, level, as_index, sort, group_keys, observed, dropna)  
9180 if level is None and by is None:  
9181     raise TypeError("You have to supply one of 'by' and 'level'")  
-> 9183 return DataFrameGroupBy(  
    9184     obj=self,  
    9185     keys=by,  
    9186     axis=axis,  
    9187     level=level,  
    9188     as_index=as_index,  
    9189     sort=sort,  
    9190     group_keys=group_keys,  
    9191     observed=observed,  
    9192     dropna=dropna,  
    9193 )  
  
File ~\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11_qbz5n2kfra8p0\Loc  
alCache\local-packages\Python311\site-packages\pandas\core\groupby\groupby.py:1329,  
in GroupBy.__init__(self, obj, keys, axis, level, grouper, exclusions, selection, as  
_index, sort, group_keys, observed, dropna)  
1326 self.dropna = dropna  
1328 if grouper is None:  
-> 1329     grouper, exclusions, obj = get_grouper(  
    1330         obj,  
    1331         keys,  
    1332         axis=axis,  
    1333         level=level,  
    1334         sort=sort,  
    1335         observed=False if observed is lib.no_default else observed,  
    1336         dropna=self.dropna,  
    1337     )  
1339 if observed is lib.no_default:  
1340     if any(ping._passed_categorical for ping in grouper.groupings):  
  
File ~\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11_qbz5n2kfra8p0\Loc  
alCache\local-packages\Python311\site-packages\pandas\core\groupby\grouper.py:1043,  
in get_grouper(obj, key, axis, level, sort, observed, validate, dropna)  
1041         in_axis, level, gpr = False, gpr, None  
1042     else:  
-> 1043         raise KeyError(gpr)  
1044 elif isinstance(gpr, Grouper) and gpr.key is not None:  
1045     # Add key to exclusions  
1046     exclusions.add(gpr.key)
```

```
KeyError: 'My boyfriend is a'
```

```
In [45]: total_sum = df_group_gender.groupby("How would you rate")["counts"].sum()
df_group_gender["total_sum"] = df_group_gender["How would you rate"].apply(lambda x:
```

```
NameError Traceback (most recent call last)
Cell In[45], line 1
----> 1 total_sum = df_group_gender.groupby("How would you rate")["counts"].sum()
      2 df_group_gender["total_sum"] = df_group_gender["How would you rate"].apply(1
      ambda x: total_sum[x])

NameError: name 'df_group_gender' is not defined
```

```
In [46]: df_group_gender["percentage"] = (df_group_gender["counts"] / df_group_gender["total_
```

```
NameError Traceback (most recent call last)
Cell In[46], line 1
----> 1 df_group_gender["percentage"] = (df_group_gender["counts"] / df_group_gender["total_sum"]) * 100

NameError: name 'df_group_gender' is not defined
```

```
In [ ]: # Add annotations for percentages
fig = px.bar(df_group_gender, x = "My boyfriend is a", y = "counts", color="How wou
# for index, row in df_group_gender.iterrows():
#     fig.add_annotation(
#         x=row["My boyfriend is a"],
#         y=row["counts"],
#         text=f"{row['percentage']:.1f}%",
#         showarrow=True,
#         font=dict(size=12)

#     )
# Update the text position to be outside the bar for better visibility
fig.update_traces(textposition='outside')
fig.show()
```

```
In [47]: def generate_plot(combined_pd, group_on="How would you rate"):
    for i in combined_pd.columns[7:21]:
        df_group_by = combined_pd.groupby(([group_on,i]).size().reset_index(name="co
        total_sum = df_group_by.groupby(group_on)["counts"].sum()
        df_group_by["total_sum"] = df_group_by[group_on].apply(lambda x: total_sum[
        df_group_by["percentage"] = (df_group_by["counts"] / df_group_by["total_sum"]
        fig = px.bar(df_group_by, x = i, y = "counts", color=group_on, barmode="gro
        fig.update_traces(textposition='outside')
        yield fig
```

```
In [48]: question_list
```

Out[48]: ['What year are you?',
 'How old are you?',
 'You could describe the adults you grew up with as...',
 'You could describe yourself as...',
 'How would you rate your religiousness / spirituality?',
 'What bests represents your gender?',
 "My girlfriend is a doctor. Lately she's been complaining about pain in her right knee and constantly taking TONS of ibuprofen to treat (like 15-20 pills a day). However, it's only gotten worse. I've told her she needs to see someone about it but she told me it was fine. So I told her that if this is how she treats herself, I'd be concerned about being her patient. She was shocked and told me that was uncalled for. Am I a jerk?",
 "My daughter is getting married soon. I only learned about her a few years ago. We've been building a relationship the last few years though and I am lucky to have her in my life now. Recently, she asked me to walk her down the aisle and while I am honored I told her no. Her step-dad practically raised her from a baby and I think that he deserves it far more than me. She was really upset and hurt when I said no. Am I a jerk?",
 "I'm a trust fund kid; I get a healthy 'allowance' from my parents, but I mostly sock it away since I don't really feel like I deserve it. I live with my girlfriend, who comes from a poor family, and we split things 50-50. Recently, she found out how much money my parents send me each month and freaked out, saying it wasn't fair that I was making her split things 50/50. I told her it was my money, and it only seems fair if we cover half the expenses. Am I a jerk?",
 "My wife and I have separate finances, but I pay for almost everything. My son starts school next year, and I'm planning on sending him to a private school. My wife's son currently goes to a much less nice public school. My wife says I'm a jerk for not paying for her daughter to go to private school as well.",
 "I saw a poster for a lost cat advertising a 500 dollar reward. I saw the cat, tracked it down, and called the owner. When I met with them, they said there wasn't actually a reward, they had just listed one because they thought it would motivate people to find the cat. I kept the cat until they coughed up the reward money. Am I a jerk?",
 "My sister's nine year old daughter is poorly behaved. One day, my sister dropped the daughter off on my doorstep without my consent and drove off, texting me that she needed me to watch her daughter for the day. The daughter complained of being hungry, so I gave her the leftovers I had. She said she didn't like them, but I told her that's all there was. She put them in the microwave until they burned, then told me she couldn't eat them and we would have to go out and get food. I told her that was what there was to eat, and if she ruined it she'd have to wait for her mom to get back. Later, everyone yelled at me for 'starving' a child. Am I a jerk?",
 "My parents want us to come out for their anniversary, and bought my sister and I tickets on the same flight. My sister has two kids - a 6 month old and a 5 year old. She is currently separated from her husband so she would have to handle 2 children by herself on a 10 hour flight.\n\nShe calls me up a week or so beforehand and asks me if I will be willing to help her take care of her kids on the flight, and something about taking shifts so we can both sleep. I tell her that I wasn't comfortable with that, but she says "nephew loves you so much" so we can work something out on the flight and hangs up.\n\nWhen I got to the airport, I chose to upgrade my seat so I could sit by myself and didn't mention it until we were on the plane. My family freaked and told me I abandoned my sister. Am I a jerk?",
 "I'm a single mom with four kids, one of whom has a different father from the other three. I get a lot of child support for one of them, and none for the other 3. 2/3rds of the child support for the eldest go towards his expenses and college fund. The other third goes towards my other children. My friend recently found out and told me it was inappropriate to use the child support intended for the one on th

e other three. Am I a jerk?",

"I have a child with a mother who never wanted anything to do with them. I make enough money to cover my expenses, but I constantly check up on the child's mother to make sure she's paying adequate child support. Periodically I either hire an investigator or her mom just tells me she got a raise and I go to court to adjust the child support accordingly. The last time I did this, she didn't show up for court and I apparently overestimated how much her raise was and I got a default judgment. She called me up and practically pleaded with me to lower her payments after I said no she insulted me and my son. Am I a jerk?",

"One of my children wants to go to an expensive school to become a dentist. I told them I'd be fine paying for it. The other one wants to go to a similarly expensive school to become a teacher. I told her that I wouldn't pay for her schooling unless she picked a career path that will make at least 100,000 a year. Am I a jerk?",

"I was in a conflict with my mother-in-law's boyfriend, in which I made a snide comment about he's never paid child support to his ex. Later, he called me and told me if I ever said anything like that ever again he'd sue me for defamation. I took the threat seriously, as he is a lawyer, and uninvited him for our wedding and told my family I couldn't be around him anymore. Am I a jerk?",

"\nSome of my relatives refuse to come to my wedding, since they don't approve of our 'lifestyle'. I would like to donate the money I will save to an LGBTQ organization in their name. I'm hoping that I or the organization will be able to send them a receipt/thank you for the donation. Would I be a jerk?",

"My wife has decided that since she can't drink because she is pregnant that I can't either. I planned to take my annual leave from work to take us (and pay for) a trip abroad. I asked my wife would the drinking rule still be in effect and she said of course. I've now decided I won't be paying for us to take this trip. Am I jerk?",

"My sister is going to be a bridesmaid at my wedding. Her hair was dyed, but she recently decided to grow it out, so parts of it are bleached and part are not. I told her it wouldn't look good in the pictures, and offered to pay for her to dye it. She said no, and I said she couldn't be in the wedding party. Am I a jerk?"]

In [49]: `combined_pd.columns`

Out[49]: `Index(['timestamp', 'What year are you?', 'How old are you?', 'You could describe the', 'You could describe yourself', 'How would you rate', 'What bests represents your', 'My girlfriend is a', 'My daughter is getting', 'I'm a trust fund', 'My wife and I', 'I saw a poster', 'My sister's nine year', 'My parents want us', 'I'm a single mom', 'I have a child', 'One of my children', 'I was in a', 'Some of my relatives', 'My wife has decided', 'My sister is going', 'Datetime'], dtype='object')`

In [147...]: `for i in generate_plot(combined_pd, "You could describe yourself"):
 i.show()`

all strongly liberal parents thinks the person who asked not to die is strongly jerk

In []: `question_list`

['What year are you?',
'How old are you?',
'You could describe the adults you grew up with as...',
'You could describe yourself as...',
'How would you rate your religiousness?',
'What bests represents your gender?',
"My boyfriend is a doctor. Lately he's been complaining about pain in his right knee and constantly taking TONS of ibuprofen to treat (like 15-20 pills a day). However, it's only gotten worse. I've told him he needs to see someone about it but he told me it was fine. So I told him that if this is how he treats herself, I'd be concerned about being his patient. He was shocked and told me that was uncalled for. Am I a jerk?",

"My son is getting married soon. Due to a complicated past, we've only just met recently. We've been building a relationship the last few years though and I am lucky to have him in my life now. Recently, he asked me to do a reading with his father while I am honored I told him no. His step-mother practically raised him from a baby and I think that she deserves it far more than me. He was really upset and hurt when I said no. Am I a jerk?",

"I'm a trust fund kid; I get a healthy 'allowance' from my parents, but I mostly soak it away since I don't really feel like I deserve it. I live with my boyfriend, who comes from a poor family, and we split things 50-50. Recently, he found out how much money my parents send me each month and freaked out, saying it wasn't fair that I was making him split things 50/50. I told him it was my money, and it only seems fair if we cover half the expenses. Am I a jerk?",

"My husband and I have separate finances, but I pay for almost everything. My son starts school next year, and I'm planning on sending him to a private school. My husband's son currently goes to a much less nice public school. My husband says I'm a jerk for not paying for his son to go to private school as well.",

"I saw a poster for a lost cat advertising a 500 dollar reward. I saw the cat, tracked it down, and called the owner. When I met with them, they said there wasn't actually a reward, they had just listed one because they thought it would motivate people to find the cat. I kept the cat until they coughed up the reward money. Am I a jerk?",

"My brother's nine year old son is poorly behaved. One day, my brother dropped the son off on my doorstep without my consent and drove off, texting me that he needed me to watch his son for the day. The son complained of being hungry, so I gave him the leftovers I had. He said he didn't like them, but I told him that's all there was. He put them in the microwave until they burned, then told me he couldn't eat them and we would have to go out and get food. I told him that was what there was to eat, and if he ruined it he'd have to wait for his dad to get back. Later, everyone yelled at me for 'starving' a child. Am I a jerk?",

"My parents want us to come out for their anniversary, and bought my brother and I tickets on the same flight. My brother has two kids - a 6 month old and a 5 year old. He is currently separated from his wife so he would have to handle 2 children by himself on a 10 hour flight.\n\nHe calls me up a week or so beforehand and asks me if I will be willing to help him take care of his kids on the flight, and something about taking shifts so we can both sleep. I tell him that I wasn't comfortable with that, but he says "nephew loves you so much" so we can work something out on the flight and hangs up.\n\nWhen I got to the airport, I chose to upgrade my seat so I could sit by myself and didn't mention it until we were on the plane. My family freaked and told me I abandoned my brother. Am I a jerk?",

"I'm a single dad with four kids, one of whom has a different mother from the other three. I get a lot of child support for one of them, and none for the other 3. 2/3rds of the child support for the eldest go towards his expenses and college fund. The other third goes towards my other children. My friend recently found out and told me it was inappropriate to use the child support intended for the one on the other three

e. Am I a jerk?",

"I have a child with a father who never wanted anything to do with them. I make enough money to cover my expenses, but I constantly check up on the child's father to make sure he's paying adequate child support. Periodically I either hire an investigator or her dad just tells me he got a raise and I go to court to adjust the child support accordingly. The last time I did this, he didn't show up for court and I apparently overestimated how much his raise was and I got a default judgment. He called me up and practically pleaded with me to lower his payments after I said no he insulted me and my son. Am I a jerk?",

"One of my children wants to go to an expensive school to become a dentist. I told them I'd be fine paying for it. The other one wants to go to a similarly expensive school to become a teacher. I told her that I wouldn't pay for him schooling unless he picked a career path that will make at least 100,000 a year. Am I a jerk?",

"I was in a conflict with my father-in-law's girlfriend, in which I made a snide comment about she's never paid child support to his ex. Later, she called me and told me if I ever said anything like that ever again she'd sue me for defamation. I took the threat seriously, as she is a lawyer, and uninvited him for our wedding and told my family I couldn't be around him anymore. Am I a jerk?",

"Some of my relatives refuse to come to my wedding, since they don't approve of our 'lifestyle'. I would like to donate the money I will save to an LGBTQ organization in their name. I'm hoping that I or the organization will be able to send them a receipt/thank you for the donation. Would I be a jerk?",

"My wife has decided that since she can't drink because she is pregnant that I can't either. I planned to take my annual leave from work to take us (and pay for) a trip abroad. I asked my wife would the drinking rule still be in effect and she said of course. I've now decided I won't be paying for us to take this trip. Am I a jerk?",

"My brother is going to be a groomsman at my wedding. His hair was dyed, but he recently decided to grow it out, so parts of it are bleached and part are not. I told him it wouldn't look good in the pictures, and offered to pay for him to dye it. He said no, and I said he couldn't be in the wedding party. Am I a jerk?"]

In []: combined_pd.columns

```
Index(['timestamp', 'What year are you?', 'How old are you?',  
       'You could describe the', 'You could describe yourself',  
       'How would you rate', 'What best represents your', 'My boyfriend is a',  
       'My son is getting', 'I'm a trust fund', 'My husband and I',  
       'I saw a poster', 'My brother's nine year', 'My parents want us',  
       'I'm a single dad', 'I have a child', 'One of my children',  
       'I was in a', 'Some of my relatives', 'My wife has decided',  
       'My brother is going', 'Datetime'],  
      dtype='object')
```

In []: df_group_gender.head(11)

	How would you rate My boyfriend is a	counts	total_sum	percentage
0	Not religious at all	1	34	60.714286
1	Not religious at all	2	21	37.500000
2	Not religious at all	3	1	1.785714
3	Somewhat religious	1	35	62.500000
4	Somewhat religious	2	18	32.142857
5	Somewhat religious	3	3	5.357143
6	Strongly religious	1	7	11.636364
7	Strongly religious	2	4	11.363636

In [255...]

```
import numpy as np
# Create a sample DataFrame
data = {
    'A': [1, 2, 3, 4, np.nan, 6, 'seven', 8, 9, 10], # Majority integers with some
    'B': [11, 12.5, 13, np.nan, 15, 16, 17, 18, 19.0, 20], # Majority integers with some
    'C': [21, 22, np.nan, 24, 25, 'twenty-six', 27, 28, 29, 30], # Majority integers with some
}

# Convert to DataFrame
df = pd.DataFrame(data)

# Display the DataFrame
print(df)
```

	A	B	C
0	1	11.0	21
1	2	12.5	22
2	3	13.0	NaN
3	4	NaN	24
4	NaN	15.0	25
5	6	16.0	twenty-six
6	seven	17.0	27
7	8	18.0	28
8	9	19.0	29
9	10	20.0	30

In [248...]

```
df["A"] = df["A"].replace("seven", 7)
```

C:\Users\shyam\AppData\Local\Temp\ipykernel_8728\1078121423.py:1: FutureWarning:

Downcasting behavior in `replace` is deprecated and will be removed in a future version. To retain the old behavior, explicitly call `result.infer_objects(copy=False)`. To opt-in to the future behavior, set `pd.set_option('future.no_silent_downcasting', True)`

In [250...]

```
df["A"].fillna(0,inplace=True)
```

```
In [253]: df["A"] = df["A"].astype(int)
```

```
In [254]: df["A"]
```

```
Out[254]: 0    1  
1    2  
2    3  
3    4  
4    0  
5    6  
6    7  
7    8  
8    9  
9   10  
Name: A, dtype: int32
```

```
In [79]: combined_pd.columns
```

```
Out[79]: Index(['timestamp', 'What year are you?', 'How old are you?',  
                 'You could describe the', 'You could describe yourself',  
                 'How would you rate', 'What bests represents your',  
                 'My girlfriend is a', 'My daughter is getting', 'I'm a trust fund',  
                 'My wife and I', 'I saw a poster', 'My sister's nine year',  
                 'My parents want us', 'I'm a single mom', 'I have a child',  
                 'One of my children', 'I was in a', 'Some of my relatives',  
                 'My wife has decided', 'My sister is going', 'Datetime'],  
                dtype='object')
```

```
In [80]: combined_pd["How would you rate"].unique()
```

```
Out[80]: array(['Not spiritual at all', 'Somewhat spiritual', 'Strongly spiritual'],  
              dtype=object)
```

```
In [90]: specific_value = 3  
count_not_a_jerk = (combined_pd[combined_pd["How would you rate"]==specific_value].count() == 3)
```

```
In [ ]:
```

```
In [124...]: col_names = []  
Vote = []  
value = []  
size = []  
for i in ['What year are you?', 'You could describe the', 'You could describe yours'  
         'You could describe yourself', 'How old are you?', 'How would you rate', 'timestamp']:  
    for j in [1,2,3]:  
        for k in combined_pd[i].unique():  
            sum = (combined_pd[combined_pd[i]==k] == j).sum().sum()  
            size.append(sum)  
            value.append(k)  
            Vote.append(j)  
            col_names.append(i)
```

```
In [95]: data = {  
             'colnames': col_names,  
             'vote': Vote,
```

```
        'value': value,
        'sum': size
    }
```

```
In [96]: df_new1 = pd.DataFrame(data)
```

```
In [97]: df_new1.head()
```

```
Out[97]:
```

	colnames	vote	value	sum
0	What year are you?	1	Junior	767
1	What year are you?	1	Other	22
2	What year are you?	1	Sophmore	194
3	What year are you?	1	Senior	168
4	What year are you?	1	Freshman	10

```
In [127...]: groupbydf = df_new1.groupby(['colnames', 'value'], as_index=False)[['sum']].sum()
```

```
In [128...]: groupbydf.head()
```

```
Out[128...]:
```

	colnames	value	sum
0	How would you rate	Not spiritual at all	1148
1	How would you rate	Somewhat spiritual	1246
2	How would you rate	Strongly spiritual	406
3	What bests represents your	Female	602
4	What bests represents your	Male	2198

```
In [126...]: df_new1.to_csv("newdf.csv")
```

```
In [106...]: df_new1["colnames"].unique()
```

```
Out[106...]: array(['What year are you?', 'You could describe the',
       'You could describe yourself', 'How would you rate',
       'What bests represents your'], dtype=object)
```

```
In [130...]: merged_df = pd.merge(df_new1, groupbydf, on=['colnames', 'value'], suffixes=( '_', '_sum'))
```

```
In [135...]: merged_df['ratio'] = (merged_df['sum'] / merged_df['sum_sum']) * 100
```

```
In [136...]: merged_df
```

```
Out[136...]
```

	colnames	vote	value	sum	sum_sum	ratio
0	What year are you?	1	Junior	767	1862	41.192266
1	What year are you?	1	Other	22	42	52.380952
2	What year are you?	1	Sophmore	194	434	44.700461
3	What year are you?	1	Senior	168	448	37.500000
4	What year are you?	1	Freshman	10	14	71.428571
...
61	What bests represents your	1	Female	250	602	41.528239
62	What bests represents your	2	Male	790	2198	35.941765
63	What bests represents your	2	Female	198	602	32.890365
64	What bests represents your	3	Male	497	2198	22.611465
65	What bests represents your	3	Female	154	602	25.581395

66 rows × 6 columns

```
In [137...]
```

```
merged_df.to_csv("analysis1.csv")
```

```
In [152...]
```

```
from scipy import stats
```

```
In [159...]
```

```
combined_pd["How old are you?"] = combined_pd["How old are you?"].replace("50+",50)
df_3["How old are you?"] = df_3["How old are you?"].replace("50+",50)
```

```
In [162...]
```

```
df_3.dropna(inplace=True)
combined_pd["How old are you?"] = combined_pd["How old are you?"].astype(int)
df_3["How old are you?"] = df_3["How old are you?"].astype(int)
```

```
In [163...]
```

```
stats.ttest_ind(combined_pd["How old are you?"], df_3["How old are you?"])
```

```
Out[163...]
```

```
TtestResult(statistic=0.7661357269307771, pvalue=0.44402185242514103, df=424.0)
```

```
In [161...]
```

```
combined_pd.dropna(inplace=True)
df_3.dropna(inplace=True)
```

```
In [ ]:
```