```
set.seed(301)
generate_data <- function(i = 1000) {</pre>
 data <- tibble(</pre>
   party = sample(c("yes", "no"), i, replace = TRUE),
   age = sample(c("18-24", "25-34", "35-44", "45-54", "55-64", "65+"), i, replace = TRUE),
   gender = sample(c("male", "female"), i, replace = TRUE),
   income = sample(c("<$25K", "$25K-$50K", "$50K-$75K", "$75K-$100K", ">$100K"), i, replace
   education = sample(c("high school", "bachelor's degree", "master's degree", "PhD"), i, re
  return(data)
sim_data <- generate_data(1000)</pre>
sim_data
# A tibble: 1,000 x 5
  party age gender income
                                 education
  <chr> <chr> <chr> <chr> <chr>
                                 <chr>
        65+
              male
                                 bachelor's degree
1 no
                      >$100K
         18-24 female $25K-$50K PhD
2 no
       55-64 female >$100K
3 yes
                                 high school
        45-54 male
                      $75K-$100K PhD
4 yes
              female $75K-$100K master's degree
5 yes
        65+
        35-44 male
                      $50K-$75K master's degree
6 yes
        45-54 male
7 yes
                      <$25K
                                 master's degree
8 no
        25-34 female $50K-$75K PhD
9 no
        45-54 male
                      $50K-$75K master's degree
        55-64 female $50K-$75K master's degree
10 yes
# i 990 more rows
# A tibble: 1,000 x 5
  party age
              gender income
                                 education
  <chr> <chr> <chr> <chr>
                                 <chr>>
         45-54 female $75K-$100K master's degree
1 yes
2 yes
                      $50K-$75K bachelor's degree
        55-64 male
3 no
         35-44 female $50K-$75K high school
4 no
              female $25K-$50K master's degree
5 no
        18-24 female $75K-$100K bachelor's degree
        45-54 male
                      $25K-$50K high school
6 yes
        35-44 male
7 no
                      $25K-$50K bachelor's degree
        35-44 male
                      $75K-$100K master's degree
8 yes
                      $25K-$50K high school
9 no
        65+
              \mathtt{male}
         55-64 female $75K-$100K bachelor's degree
# i 990 more rows
```

```
# A tibble: 1,000 x 5
  party age
               gender income
                                education
  <chr> <chr> <chr> <chr>
                                <chr>>
 1 yes
         65+
               female $25K-$50K master's degree
2 yes
         55-64 female $25K-$50K PhD
3 yes
         18-24 female >$100K
                                high school
4 no
         25-34 female $25K-$50K master's degree
5 no
         65+
               male
                      >$100K
                                master's degree
         55-64 female <$25K
6 yes
                                high school
7 no
         35-44 male
                      >$100K
                                bachelor's degree
         18-24 female >$100K
                                bachelor's degree
8 yes
9 yes
         45-54 female $50K-$75K master's degree
10 yes
         65+
               male
                      >$100K
                                PhD
# i 990 more rows
# A tibble: 1,000 x 5
  party age
              gender income
                                 education
  <chr> <chr> <chr> <chr>
                                 <chr>
 1 yes
         55-64 female <$25K
                                 PhD
2 no
         25-34 female <$25K
                                 master's degree
3 no
         65+
               male
                      $50K-$75K
                                 high school
         25-34 female $25K-$50K
                                 PhD
4 yes
5 yes
         65+
               male
                      $75K-$100K high school
         35-44 female >$100K
                                 bachelor's degree
6 yes
               female <$25K
7 yes
         65+
                                 high school
8 no
         25-34 female $50K-$75K master's degree
9 no
         35-44 male
                      <$25K
                                 master's degree
         35-44 female $25K-$50K master's degree
10 no
# i 990 more rows
# A tibble: 1,000 x 5
  party age
               gender income
                                 education
   <chr> <chr> <chr> <chr>
                                 <chr>>
 1 no
         18-24 female >$100K
                                 high school
2 yes
         35-44 male
                      >$100K
                                 bachelor's degree
         18-24 female $25K-$50K PhD
3 yes
         45-54 female $25K-$50K high school
4 no
5 yes
         18-24 male
                      $50K-$75K bachelor's degree
```

6 no

7 no

8 no

9 no

55-64 male

male

65+

35-44 female \$25K-\$50K PhD

55-64 female \$75K-\$100K PhD

<\$25K

\$50K-\$75K high school

PhD

```
10 no 65+ male $50K-$75K master's degree # i 990 more rows
```

```
# A tibble: 1,000 x 5
  party age gender income
                                education
  <chr> <chr> <chr> <chr>
                                <chr>
1 yes
        65+ female <$25K
                                high school
        18-24 female $75K-$100K master's degree
2 yes
        25-34 male $75K-$100K master's degree
3 yes
4 yes
       18-24 female >$100K
                                high school
5 yes 45-54 female >$100K
                                PhD
       25-34 female <$25K
                                PhD
6 no
7 yes 55-64 female $50K-$75K PhD
            \mathtt{male}
                     $50K-$75K high school
8 yes
        65+
9 yes
        25-34 female <$25K
                                bachelor's degree
                     $50K-$75K high school
10 yes
        18-24 male
# i 990 more rows
```

A tibble: 1,000 x 5

	party	age	gender	income	education
	<chr>></chr>	<chr>></chr>	<chr></chr>	<chr></chr>	<chr></chr>
1	no	18-24	${\tt female}$	\$50K-\$75K	master's degree
2	yes	45-54	male	<\$25K	high school
3	no	18-24	${\tt female}$	\$75K-\$100K	PhD
4	no	35-44	male	\$25K-\$50K	high school
5	no	35-44	${\tt female}$	\$50K-\$75K	master's degree
6	no	65+	male	\$25K-\$50K	master's degree
7	yes	18-24	male	>\$100K	high school
8	no	25-34	${\tt female}$	>\$100K	bachelor's degree
9	no	18-24	${\tt female}$	\$75K-\$100K	master's degree
10	no	45-54	${\tt female}$	>\$100K	bachelor's degree

A tibble: 1,000 x 5

i 990 more rows

	party	age	gender	income	education
	<chr>></chr>	<chr>></chr>	<chr></chr>	<chr></chr>	<chr></chr>
1	yes	45-54	${\tt female}$	\$75K-\$100K	master's degree
2	no	55-64	${\tt female}$	>\$100K	bachelor's degree
3	no	55-64	male	\$25K-\$50K	bachelor's degree
4	no	55-64	${\tt female}$	\$75K-\$100K	PhD
5	yes	65+	${\tt female}$	\$50K-\$75K	high school
6	ves	25-34	male	\$25K-\$50K	bachelor's degree

```
7 no 55-64 female $75K-$100K high school
8 yes 35-44 female $75K-$100K PhD
9 no 18-24 male $25K-$50K bachelor's degree
10 no 45-54 male $75K-$100K master's degree
# i 990 more rows
```

A tibble: 1,000 x 5

	party	age	gender	income	education
	<chr></chr>	<chr></chr>	<chr></chr>	<chr></chr>	<chr></chr>
1	no	55-64	${\tt female}$	\$50K-\$75K	master's degree
2	no	18-24	${\tt female}$	\$75K-\$100K	PhD
3	yes	45-54	male	\$25K-\$50K	PhD
4	yes	35-44	male	\$75K-\$100K	master's degree
5	no	18-24	male	\$50K-\$75K	high school
6	no	18-24	${\tt female}$	\$50K-\$75K	master's degree
7	no	45-54	male	\$75K-\$100K	bachelor's degree
8	yes	65+	male	>\$100K	master's degree
9	yes	45-54	${\tt female}$	>\$100K	master's degree
10	yes	45-54	${\tt female}$	<\$25K	PhD
ш.	. 000				

i 990 more rows

A tibble: 1,000 x 5

	party	age	gender	income	education
	<chr></chr>	<chr></chr>	<chr></chr>	<chr></chr>	<chr></chr>
1	no	55-64	male	\$50K-\$75K	PhD
2	no	35-44	${\tt female}$	\$25K-\$50K	PhD
3	no	65+	${\tt female}$	<\$25K	master's degree
4	yes	35-44	${\tt female}$	\$25K-\$50K	PhD
5	no	18-24	male	\$50K-\$75K	master's degree
6	yes	65+	female	<\$25K	master's degree
7	yes	65+	male	<\$25K	master's degree
8	no	18-24	${\tt female}$	\$50K-\$75K	high school
9	yes	65+	male	\$75K-\$100K	high school
10	yes	25-34	${\tt female}$	\$75K-\$100K	bachelor's degree
# i 990 more rows					