The population of US cities and cities from fictional sources

The data is called cities.

Description

The data is built to have the count in the number column with the first and last digit separated

The source of this data is < https://github.com/midnightradio/cse140-data-programming and https://simplemaps.com/data/us-cities >

Data format

A data frame with columns:

| variable | class | description |
|----------|----------------|---|
| country | character | Either US or fiction |
| city | character | The city within the country |
| location | character · | The region within which the city is located |
| number | numeric | The population of that city |
| first | character | The first digit of number |
| last | character | The last digit of number |

The population of US cities

The data is called cities_us.

Description

The data is built to have the count in the number column with the first and last digit separated. The source of this data is < https://simplemaps.com/data/us-cities >

Data format

A data frame with columns:

| variable | class | description |
|-------------------------------------|--|---|
| city location number first | character character numeric character | The city within the country The region within which the city is located The population of that city The first digit of number |
| last | character | The last digit of number |

The population of cities from fictional sources

The data is called cities fiction.

Description

The data is built to have the count in the number column with the first and last digit separated. The source of this data is < https://github.com/midnightradio/cse140-data-programming >

Data format

A data frame with columns:

| variable | class | description |
|----------|-----------|---|
| city | character | The city within the country |
| location | character | The region within which the city is located |
| number | numeric | The population of that city |
| first | character | The first digit of number |
| last | character | The last digit of number |

The count of citizens on waitlists for medical procedures

The data is called waitlist.

Description

The data is built to have the count in the number column with the first and last digit separated The source of this data is < https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5942457/ >

Data format

A data frame with columns:

| variable | class | description |
|--------------------|-----------|---|
| country | character | The source country of the data |
| $_{\mathrm{type}}$ | character | The type of medical procedure |
| details | character | Further details about the medical procedure |
| month | character | The month of the year |
| year | numeric | Year |
| number | numeric | The number of people on the waitlist |
| first | character | The first digit of number |
| last | character | The last digit of number |

The count of Finish citizens on waitlists for medical procedures

The data is called waitlist finland.

Description

The data is built to have the count in the number column with the first and last digit separated

The source of this data is < https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5942457/ >

Data format

A data frame with columns:

| variable | class | description |
|-----------------|------------------------|--|
| country | character character | The source country of the data The type of medical procedure |
| details | character | Further details about the medical procedure |
| month | character | The month of the year |
| year | numeric | Year |
| number first | numeric character | The number of people on the waitlist The first digit of number |
| last | character | The last digit of number The last digit of number |

The count of Spanish citizens on waitlists for medical procedures

The data is called waitlist_spain.

Description

The data is built to have the count in the number column with the first and last digit separated. The source of this data is < https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5942457/ >

Data format

A data frame with columns:

| variable | class | description |
|---|--|--|
| country type details month year number | character character character character numeric numeric | The source country of the data The type of medical procedure Further details about the medical procedure The month of the year Year The number of people on the waitlist |
| first last | character character | The first digit of number The last digit of number |

The election results for Iran and US presidential elections

The data is called election.

Description

The data is built to have the count in the number column with the first and last digit separated. The source of this data is < https://github.com/midnightradio/cse140-data-programming >

Data format

A data frame with columns:

| variable | class | description |
|---|--|--|
| country region candidate number first last | character character numeric character | The source country of the data The region within which the election votes were tallied The name of the electoral candidate The number of votes cast for the candidate The first digit of number The last digit of number |

The election results for the 2009 presidential elections in Iran

The data is called election_iran.

Description

The data is built to have the count in the number column with the first and last digit separated The source of this data is < https://github.com/midnightradio/cse140-data-programming >

Data format

A data frame with columns:

| variable | class | description |
|-----------|-----------|---|
| region | | The region within which the election votes were tallied |
| candidate | | The name of the electoral candidate |
| number | numeric | The number of votes cast for the candidate |
| first | | The first digit of number |
| last | character | The last digit of number |

The election results for the Obama McCain presidential elections in the US

The data is called election us.

Description

The data is built to have the count in the number column with the first and last digit separated. The source of this data is < https://github.com/midnightradio/cse140-data-programming >

Data format

| variable | class | description |
|------------------|------------------------|--|
| region candidate | character character | The region within which the election votes were tallied The name of the electoral candidate |
| number | numeric | The number of votes cast for the candidate |
| first | character | The first digit of number |
| last | character | The last digit of number |

The counts and percentage of first digits for all data objects

The data is called benford.

Description

This data has to counts by first digit for the election, waitlist, and cities data

The source of this data is < https://github.com/midnightradio/cse140-data-programming, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5942457/, and https://simplemaps.com/data/us-cities >

Data format

A data frame with columns:

| variable | class | description |
|-----------------|--------------------------|--|
| data | character | The data object used to calculate digit counts |
| country | character | The location or group within each data object |
| first | character | The first digit number |
| n | integer | The count of numbers that started with that digit |
| percent | numeric | The percent of the total for each data and country group |
| benford_percent | $\operatorname{numeric}$ | The expected propoprtion under Benford's law |

The counts and percentage of last digits for college students asked to pick random numbers

The data is called pick_random.

Description

This data has to counts by last digit for the random guesses

The source of this data is < https://docs.google.com/spreadsheets/d/1TasFdyWr9xN7uWiWw0PkaFDwHYgQiC3y41YKR9Cedit#gid=0 and https://www.reddit.com/r/dataisbeautiful/comments/acow6y/asking_over_8500_students_to_pick_a_random_number/ >

Data format

| variable | class | description |
|-----------------|-----------|--|
| digit | character | The number of interest between 0-9 |
| n_09 | integer | The count of people that picked that digit. Note 10s were changed to 0 |
| percent_09 | numeric | The percentage of each digit of the total for the 0-9 digit counts |
| n_last | integer | The count of the last digit of numbers picked between 0 and 1 million. |
| $percent_last$ | numeric | The percentage of each digt of the total for the last digit counts. |

The counts and percentage of last digits for all data objects

The data is called last_digit.

Description

This data has to counts by last digit for the election, waitlist, and cities data

The source of this data is < https://github.com/midnightradio/cse140-data-programming, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5942457/, and https://simplemaps.com/data/us-cities>

Data format

A data frame with columns:

| variable | class | description |
|--------------|--------------------------|--|
| data | character | The data object used to calculate digit counts |
| country | character | The location or group within each data object |
| last | character | The last digit number |
| n | integer | The count of numbers that ended with that digit |
| percent | numeric | The percent of the total for each data and country group |
| last_percent | $\operatorname{numeric}$ | The expected propoprtion under complete randomness |

The combined accounting data sets

The data is called accounting.

Description

The data is built to have the count in the number column with the first and last digit separated

The source of this data is < https://github.com/carloscinelli/benford.analysis and https://www.amazon.com/Benfords-Law-Applications-Accounting-Detection/dp/1118152859 >

Data format

| variable | class | description |
|----------|-----------|--|
| data | character | The data object used to calculate digit counts |
| number | numeric | The number of votes cast for the candidate |

| variable | class | description |
|---------------|-------|--|
| first last | | The first digit of number The last digit of number |

The amounts paid to vendors for the 90 days preceding General Motor's 2009 liquidation.

The data is called accounting_gm.

Description

The data is built to have the count in the number column with the first and last digit separated

The source of this data is < https://github.com/carloscinelli/benford.analysis and https://www.amazon.com/Benfords-Law-Applications-Accounting-Detection/dp/1118152859 >

Data format

A data frame with columns:

| variable | class | description |
|-------------------------|-------|---|
| number first last | | The number of votes cast for the candidate The first digit of number The last digit of number |

A dataset containing the card transactions for a government entity - 2010.

The data is called accounting_government.

Description

The data is built to have the count in the number column with the first and last digit separated

The source of this data is < https://github.com/carloscinelli/benford.analysis and https://www.amazon.com/Benfords-Law-Applications-Accounting-Detection/dp/1118152859 >

Data format

| variable | class | description |
|-------------------------|-------|---|
| number first last | | The number of votes cast for the candidate The first digit of number The last digit of number |

Financial Statements numbers of Sino Forest Corporation's 2010 Report.

The data is called accounting_sino.

Description

The data is built to have the count in the number column with the first and last digit separated

The source of this data is < https://github.com/carloscinelli/benford.analysis and https://www.amazon.com/Benfords-Law-Applications-Accounting-Detection/dp/1118152859 >

Data format

A data frame with columns:

| variable | class | description |
|-------------------------|-------|---|
| number first last | | The number of votes cast for the candidate The first digit of number The last digit of number |

A dataset of the 2010's payments data of a division of a West Coast utility company.

The data is called accounting_utility.

Description

The data is built to have the count in the number column with the first and last digit separated

The source of this data is < https://github.com/carloscinelli/benford.analysis and https://www.amazon.com/Benfords-Law-Applications-Accounting-Detection/dp/1118152859 >

Data format

A data frame with columns:

| variable | class | description |
|-------------------------|-------|---|
| number first last | | The number of votes cast for the candidate The first digit of number The last digit of number |

The counts and percentage of first digits for all data objects

The data is called benford_accounting.

Description

This data has to counts by first digit for the accounting data

The source of this data is < https://github.com/carloscinelli/benford.analysis and https://www.amazon.com/Benfords-Law-Applications-Accounting-Detection/dp/1118152859 >

Data format

A data frame with columns:

| variable | class | description |
|--------------------|--------------------------|--|
| data | character | The data object used to calculate digit counts |
| first | character | The first digit number |
| n | integer | The count of numbers that started with that digit |
| percent | numeric | The percent of the total for each data and country group |
| $benford_percent$ | $\operatorname{numeric}$ | The expected propoprtion under Benford's law |

The counts and percentage of last digits for all data objects

The data is called last_digit_accounting.

Description

This data has to counts by last digit for the accounting data

The source of this data is < https://github.com/carloscinelli/benford.analysis and https://www.amazon.com/Benfords-Law-Applications-Accounting-Detection/dp/1118152859 >

Data format

A data frame with columns:

| variable | class | description |
|--------------|--------------------------|--|
| data | character | The data object used to calculate digit counts |
| last | character | The last digit number |
| n | integer | The count of numbers that ended with that digit |
| percent | numeric | The percent of the total for each data and country group |
| last_percent | $\operatorname{numeric}$ | The expected propoprtion under complete randomness |

A full dataset of the 2010's payments data of a division of a West Coast utility company.

The data is called utility_data.

Description

This data adds a few more variables beyond accounting_utility

The source of this data is < https://github.com/carloscinelli/benford.analysis and https://www.amazon.com/Benfords-Law-Applications-Accounting-Detection/dp/1118152859 >

Data format

A data frame with columns:

| variable | class | description |
|---------------------------------------|---|--|
| vendornum date invnum amount | character Date character numeric | Vendor Number Date of the invioce The invoice number The amount on the invoice |

A full dataset containing the card transactions for a government entity - 2010.

The data is called government_data.

Description

This data adds a few more variables beyond accounting_government

The source of this data is < https://github.com/carloscinelli/benford.analysis and https://www.amazon.com/Benfords-Law-Applications-Accounting-Detection/dp/1118152859 >

Data format

| variable | class | description | |
|-------------------|-----------|--|--|
| cardnum | character | Credit card number used for the purchase | |
| date | Date | The date of the transaction | |
| merchnum | character | The merchant number | |
| merchdescription | character | the merchant name and details | |
| merchstate | character | The state where the merchant is located | |
| merchzip | character | The zipcode of the merchant | |
| transtype | character | The transaction type. A, D, P, Y | |
| amount | numeric | the amount of the transaction | |
| merch_clean | character | A cleaned merchant name | |
| $merch_other200$ | character | All merchants with less than 200 transactions grouped to other | |
| $merch_other100$ | character | All merchants with less than 100 transactions grouped to other | |
| merch_other50 | character | All merchants with less than 50 transactions grouped to other | |
| merch_other10 | character | All merchants with less than 10 transactions grouped to other | |