```
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. clear
>
    Back to Fan's Stata4Econ or other repositories:
   - http://fanwangecon.github.io
- http://fanwangecon.github.io/Stata4Econ
- http://fanwangecon.github.io/R4Econ
>
    - http://fanwangecon.github.io/M4Econ
>
>
>
    - http://fanwangecon.github.io/CodeDynaAsset/
    - http://fanwangecon.github.io/Math4Econ/
    - http://fanwangecon.github.io/Stat4Econ/
    - http://fanwangecon.github.io/Tex4Econ
    1. drop a random subset of values
 ///--- Start log
> set more off
. capture log close all
. cd "${root log}"
C:\Program Files (x86)\Stata14
. global st link "/rand/basic/fs droprand"
. global curlogfile "~/Stata4Econ/${st link}"
. global st logname "drop random subset"
. log using "${curlogfile}" , replace name($st logname)
(note: file C:\Users\fan/Stata4Econ//rand/basic/fs droprand.smcl not found)
      name: drop random subset
            C:\Users\fan/Stata4Econ//rand/basic/fs droprand.smcl
       log:
 log type:
             smcl
              6 Oct 2019, 18:50:13
 opened on:
 log on $st logname
(log already on)
. ///-- Site Link: Fan's Project Reusable Stata Codes Table of Content
> di "https://fanwangecon.github.io/"
https://fanwangecon.github.io/
di "https://fanwangecon.github.io/Stata4Econ/"
https://fanwangecon.github.io/Stata4Econ/
 ///-- File Title
> global filetitle "Stata Drop a Random Subset of Observations"
. ///--- Load Data
> set more off
. sysuse auto, clear
(1978 Automobile Data)
```

///--- Generating Index for Dropping

> set seed 987

. scalar it drop frac = 3

. Sunday October 6 18:50: $(\frac{1}{4}n_{-}^{201})^*$ it Page 2 frac)

. gen row_idx_rand = round(it_drop_frac*uniform())

.
. //--- drop when row_idx_it == row_idx_rand, if it_drop_frac set at 3
. list make price mpg row_idx_it row_idx_rand, ab(20)

make	price	mpg	row_idx_it	row_idx_rand
AMC Concord	4,099	22	0	0
AMC Pacer	4,749	17	0	2
AMC Spirit	3,799	22	0	1
Buick Century	4,816	20	0	3
Buick Electra	7,827	15	0	1
Buick LeSabre	5,788	18	0	1
Buick Opel	4,453	26	0	2
Buick Regal	5,189	20	0	2
Buick Riviera	10,372	16	0	1
Buick Skylark	4,082	19	0	2
Cad. Deville	11,385	14	0	1
Cad. Eldorado	14,500	14	0	2
Cad. Seville	15,906	21	1	1
Chev. Chevette	3,299	29	1	2
Chev. Impala	5,705	16	1	1
Chev. Malibu	4,504	22	1	2
Chev. Monte Carlo	5,104	22	1	2
Chev. Monza	3,667	24	1	2
Chev. Nova	3,955	19	1	3
Dodge Colt	3,984	30	1	1
Dodge Diplomat	4,010	18	1	2
Dodge Magnum	5,886	16	1	2
Dodge St. Regis	6,342	17	1	1
Ford Fiesta	4,389	28	1	0
Ford Mustang	4,187	21	1	1
Linc. Continental	11,497	12	1	3
Linc. Mark V	13,594	12	1	2
Linc. Versailles	13,466	14	1	2
Merc. Bobcat Merc. Cougar	3,829 5,379	22 14	1 1	3 2
	·			
Merc. Marquis Merc. Monarch	6,165 4,516	15 18	1 1	1 3
Merc. XR-7	6,303	14	1	2
Merc. Zephyr	3,291	20	1	1
Olds 98	8,814	21	ī	1
Olds Cutl Supr	5,172	19	1	1
Olds Cutlass	4,733	19	2	1
Olds Delta 88	4,890	18	2	ī
Olds Omega	4,181	19	2	ī
Olds Starfire	4,195	24	2	1
Olds Toronado	10,371	16	2	3
Plym. Arrow	4,647	28	2	1
Plym. Champ	4,425	34	2	0
Plym. Horizon	4,482	25	2	1
Plym. Sapporo	6,486	26	2	2
Plym. Volare	4,060	18	2	1
Pont. Catalina	5,798	18	2	2
Pont. Firebird	4,934	18	2	1
Pont. Grand Prix	5,222	19	2	1
Pont. Le Mans	4,723	19	2	2
Pont. Phoenix	4,424	19	2	1
Pont. Sunbird	4,172	24	2	2
Audi 5000	9,690	17	2	3
Audi Fox	6,295	23	2	2
BMW 320i	9,735	25	2	2
Datsun 200	6,229	23	2	1
	0,443	23		
		35	2	વ
Datsun 210 Datsun 510	4,589 5,079	35 24	2 2	3 2

```
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                                      Page 3
                                                                           0
                                                         2
61.
      Honda Accord
                               5,799
                                         25
                                                         2
                                                                          3
                               4,499
62.
                                         28
                                                                          2
      Honda Civic
                                                         3
63.
      Mazda GLC
                               3,995
                                         30
                                                         3
                                                                          1
                              12,990
64.
                                         14
                                                         3
                                                                          2
      Peugeot 604
                               3,895
                                                         3
                                                                           3
65.
      Renault Le Car
                                         26
                                                         3
66.
      Subaru
                               3,798
                                         35
                                                                          1
67.
      Toyota Celica
                               5,899
                                         18
                                                         3
                                                                          3
68.
                               3,748
                                         31
                                                         3
                                                                          1
      Toyota Corolla
69.
      Toyota Corona
                               5,719
                                         18
                                                         3
                                                                           0
70.
      VW Dasher
                               7,140
                                         23
                                                         3
                                                                          1
71.
      VW Diesel
                               5,397
                                         41
                                                         3
                                                                           0
                               4,697
                                                         3
72.
      VW Rabbit
                                         25
                                                                           3
73.
      VW Scirocco
                               6,850
                                         25
                                                         3
                                                                           3
                              11,995
74.
      Volvo 260
                                         17
                                                         3
                                                                           2
```

```
///--- Drop approximately 1/2 of make randomly
> set seed 987
. scalar it drop frac = 2
. clonevar make wth mimssing = make
 replace make wth mimssing = "" if round(( n/ N)*it drop frac) == round(it_drop_frac*uniform())
(33 real changes made)
. ///--- Drop approximately 1/3 of mpg randomly
> set seed 987
. scalar it_drop_frac = 3
. clonevar mpg wth mimssing = mpg
 replace mpg wth mimssing =. if round(( n/ N)*it drop frac) == round(it drop frac*uniform())
(21 real changes made, 21 to missing)
. ///--- Drop approximately 1/5 of mpg randomly
> set seed 987
. scalar it drop frac = 5
. clonevar price wth mimssing = price
 replace price wth mimssing =. if round(( n/ N)*it drop frac) == round(it drop frac*uniform())
(16 real changes made, 16 to missing)
. ///--- Summarize
```

make

type: string (str18), but longest is str17

unique values: 74 missing "": 0/74

examples: "Cad. Deville" "Dodge Magnum"

"Merc. XR-7"
"Pont. Catalina"

warning: variable has embedded blanks

make wth mimssing

> codebook make*

type: string (str18), but longest is str17

unique values: 41 missing "": 33/74

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"Cad. Deville" "Mazda GLC"

warning: variable has embedded blanks

. summ mpg* price*

Variable	Obs	Mean	Std. Dev.	Min	Max
mpg wth mi~g	74	21.2973	5.785503	12	41
	53	21.15094	6.41931	12	41
price price	74	6165.257	2949.496	3291	15906
	58	6254.069	3219.379	3291	15906

. list make* mpg* price*

1	make	make_wth_mimssing	mpg	mpg_wt~g	price	price_~g
1	AMC Concord		22		4,099	
1	AMC Pacer	AMC Pacer	17	17	4,749	4,749
2	AMC Spirit	AMC Spirit	22	22	3,799	3,799
]	Buick Century	Buick Century	20	20	4,816	4,816
1	Buick Electra	Buick Electra	15	15	7,827	7,827
]	Buick LeSabre	Buick LeSabre	18	18	5,788	5,788
]	Buick Opel	Buick Opel	26	26	4,453	4,453
ı	Buick Regal	Buick Regal	20	20	5,189	5,189
	Buick Riviera	Buick Riviera	16	16	10,372	-,
ı	Buick Skylark	Buick Skylark	19	19	4,082	4,082
	Cad. Deville	Cad. Deville	14	14	11,385	11,385
l	Cad. Eldorado	Cad. Eldorado	14	14	14,500	14,500
	Cad. Seville	Cad. Seville	21		15,906	15,906
	Chev. Chevette	Chev. Chevette	29	29	3,299	3,299
	Chev. Impala	Chev. Impala	16		5,705	5,705
	Char Walibra	Chan Waliba				
	Chev. Malibu	Chev. Malibu	22	22	4,504	4,504
	Chev. Monte Carlo	Chev. Monte Carlo	22	22	5,104	5,104
	Chev. Monza	Chev. Monza	24	24	3,667	3,667
	Chev. Nova	Chev. Nova	19	19	3,955	3,955
]	Dodge Colt		30	•	3,984	3,984
1	Dodge Diplomat		18	18	4,010	4,010
1	Dodge Magnum		16	16	5,886	5,886
	Dodge St. Regis		17	•	6,342	
	Ford Fiesta	Ford Fiesta	28	28	4,389	4,389
]	Ford Mustang	Ford Mustang	21	•	4,187	4,187
	Linc. Continental	Linc. Continental	12	12	11,497	11,497
:	Linc. Mark V		12	12	13,594	13,594
:	Linc. Versailles		14	14	13,466	13,460
	Merc. Bobcat	Merc. Bobcat	22	22	3,829	3,829
	Merc. Cougar		14	14	5,379	5,37
1	Merc. Marquis		15		6,165	
	Merc. Monarch	Merc. Monarch	18	18	4,516	4,51
	Merc. Monarch Merc. XR-7	Merc. Monarch	14	14	6,303	6,303
		Merc. Zephyr	20	1-3		
	Merc. Zephyr Olds 98	Olds 98	21	•	3,291 8,814	3,29 8,81
_	014- 0-+1 0		19			
	Olds Cutl Supr	014- 0-1		1.0	5,172	4 72
	Olds Cutlass	Olds Cutlass	19	19	4,733	4,733
	Olds Delta 88		18	18	4,890	4,890
	Olds Omega Olds Starfire		19 24	19 24	4,181 4,195	4,18: 4,19:
					<u>·</u>	
	Olds Toronado	Olds Toronado	16	16	10,371	10,371
	Plym. Arrow	Plym. Arrow	28	28	4,647	4,64
	Plym. Champ	Plym. Champ	34	34	4,425	4,42
	Plym. Horizon		25	25	4,482	4,48
	Plym. Sapporo		26	•	6,486	
	Plym. Volare		18	18	4,060	4,060
	Pont. Catalina		18		5,798	-
	Pont. Firebird		18	18	4,934	4,934
1						
	Pont. Grand Prix		19	19	5,222	5,222

51. 52. 53. 54. 55.	lay October 6 18:50 Pont. Phoenix Pont. Sunbird Audi 5000 Audi Fox BMW 320i	:14 _{Pont} . Phoenix ⁵ Audi 5000	19 24 17 23 25	19 17	4,424 4,172 9,690 6,295 9,735	4,424 9,690 9,735
56. 57. 58. 59.	Datsun 200 Datsun 210 Datsun 510 Datsun 810 Fiat Strada	Datsun 200 Datsun 510 Fiat Strada	23 35 24 21 21	23 35 21 21	6,229 4,589 5,079 8,129 4,296	6,229 4,589 5,079
61. 62. 63. 64.	Honda Accord Honda Civic Mazda GLC Peugeot 604 Renault Le Car	Mazda GLC Peugeot 604	25 28 30 14 26	25 28 30 14	5,799 4,499 3,995 12,990 3,895	3,995 12,990
66. 67. 68. 69.	Subaru Toyota Celica Toyota Corolla Toyota Corona VW Dasher	Subaru Toyota Corolla Toyota Corona VW Dasher	35 18 31 18 23	35 31 18 23	3,798 5,899 3,748 5,719 7,140	3,798 5,899 3,748 5,719 7,140
71. 72. 73. 74.	VW Diesel VW Rabbit VW Scirocco Volvo 260	VW Diesel	41 25 25 17	41 17	5,397 4,697 6,850 11,995	5,397 11,995

```
. ///--- End Log and to HTML
> log close _all
       name: drop_random_subset
               C:\Users\fan/Stata4Econ//rand/basic/fs_droprand.smcl
         log:
  log type:
 closed on:
                 6 Oct 2019, 18:50:13
. capture noisily {
. log2html "${curlogfile}", replace title($filetitle (<a href="https://github.com/FanWangEcon/S > nk}.do">DO</a>, more see: <a href="https://fanwangecon.github.io/">Fan</a> and <a href="https://fanwangecon.github.io/">Fan</a>
> 4Econ">Stata4Econ</a>))
HTML log file ~/Stata4Econ//rand/basic/fs_droprand.html created
. }
. ///--- to PDF
> capture noisily {
             translator set Results2pdf logo off
             translator set Results2pdf fontsize 10
             translator set Results2pdf pagesize custom translator set Results2pdf pagewidth 8.27
             translator set Results2pdf pageheight 11.69
             translator set Results2pdf lmargin 0.2
             translator set Results2pdf rmargin 0.2
             translator set Results2pdf tmargin 0.2 translator set Results2pdf bmargin 0.2
```

translate @Results "\${curlogfile}.pdf", replace translator(Results2pdf)