

co2-gpp-modeling-EDA

Import Libraries

```
# Load libraries
## Load a set of packages including: broom, cli, crayon, dbplyr , dplyr, dtplyr, forcats,
## googledrive, googlesheets4, ggplot2, haven, hms, httr, jsonlite, lubridate , magrittr,
## modelr, pillar, purrr, readr, readxl, reprex, rlang, rstudioapi, rvest, stringr, tibble,
## tidyr, xml2
library(tidyverse)
## provides many functions useful for data analysis, high-level graphics, and utility operations like d
library(Hmisc)
## to work with "grid" graphics
library(gridExtra)
## To generate regression results, tables, and plots
library(finalfit)
## To produces LaTeX code, HTML/CSS code and ASCII text for well-formatted tables
library(stargazer)
```

Import data from csv file

Rows: 19015 Columns: 62

```
# EDA/src/
raw_df <- read_csv("../../data/datasets/data_monthly_v1_0.csv")
```

link to the handmade codebook

Summary statistics of variables

Rows: 19015 Columns: 62

```
#summary(df)
```

```
describe(raw_df)
```

```
## raw_df
##
## 62 Variables      19015 Observations
```

```

## -----
## SITE_ID
##      n missing distinct
##    19015      0      243
##
## lowest : AR-SLu AR-Vir AT-Neu AU-Ade AU-ASM, highest: US-Wi4 US-Wjs US-Wkg US-WPT ZM-Mon
## -----
## year
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0      20    0.997    2011    5.927    2002    2004
##      .25      .50      .75      .90      .95
##    2006    2011    2015    2018    2019
##
## lowest : 2001 2002 2003 2004 2005, highest: 2016 2017 2018 2019 2020
##
## Value      2001  2002  2003  2004  2005  2006  2007  2008  2009  2010  2011
## Frequency   444   619   730   927  1038  1017  1092  1179  1118  1147  1191
## Proportion 0.023 0.033 0.038 0.049 0.055 0.053 0.057 0.062 0.059 0.060 0.063
##
## Value      2012  2013  2014  2015  2016  2017  2018  2019  2020
## Frequency  1275  1212  1188   876   936   897   720   705   704
## Proportion 0.067 0.064 0.062 0.046 0.049 0.047 0.038 0.037 0.037
## -----
## month
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0      12    0.993    6.591    3.898      1      2
##      .25      .50      .75      .90      .95
##      4      7      10      11      12
##
## lowest : 1 2 3 4 5, highest: 8 9 10 11 12
##
## Value      1      2      3      4      5      6      7      8      9      10      11
## Frequency  1422  1479  1545  1560  1633  1629  1631  1682  1668  1673  1600
## Proportion 0.075 0.078 0.081 0.082 0.086 0.086 0.086 0.088 0.088 0.088 0.084
##
## Value      12
## Frequency  1493
## Proportion 0.079
## -----
## TIMESTAMP
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0      240      1    201069    592.8    200210    200402
##      .25      .50      .75      .90      .95
##    200612    201103    201502    201804    201908
##
## lowest : 200101 200102 200103 200104 200105, highest: 202008 202009 202010 202011 202012
## -----
## dataset
##      n missing distinct
##    19015      0      4
##
## Value      AmeriFlux    FLUXNET    ICOS2018    ICOS2020
## Frequency      3703      6614      336      8362
## Proportion    0.195    0.348    0.018    0.440

```

```

## -----
## SITE_IGBP
##      n missing distinct
##    19015      0      11
##
## lowest : CRO CSH DBF EBF ENF, highest: MF OSH SAV WET WSA
##
## Value      CRO  CSH  DBF  EBF  ENF  GRA  MF  OSH  SAV  WET  WSA
## Frequency  2574  252  2582  796  5422  2972  1217  886  403  1186  725
## Proportion 0.135 0.013 0.136 0.042 0.285 0.156 0.064 0.047 0.021 0.062 0.038
## -----
## LOCATION_LAT
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0      243      1    42.19    16.44   -12.49    31.79
##      .25      .50      .75      .90      .95
##    39.94    45.95    50.89    56.10    64.17
##
## lowest : -37.42590 -37.42220 -36.67320 -36.64990 -35.65660
## highest:  70.46960  70.82914  74.47328  74.48143  78.18600
## -----
## LOCATION_LONG
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0      242      1   -21.17    73.53 -120.966 -109.942
##      .25      .50      .75      .90      .95
##   -90.080    5.744   13.513   29.610  131.152
##
## lowest : -157.4089 -155.7503 -147.8555 -147.4876 -125.3336
## highest:  147.4943  148.1517  148.4746  150.7236  161.3414
## -----
## TA_F
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0   14594      1    10.34    10.72   -5.710   -1.971
##      .25      .50      .75      .90      .95
##     3.874   10.966   17.159   22.520   25.248
##
## lowest : -31.455 -28.628 -28.290 -28.173 -27.865
## highest:  32.618  32.707  32.847  32.992  33.400
## -----
## VPD_F
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0   9775      1     5.432    5.098    0.495    0.832
##      .25      .50      .75      .90      .95
##     1.884    4.008    6.998   11.903   16.286
##
## lowest :  0.007  0.022  0.034  0.046  0.060, highest: 37.228 37.798 38.316 39.361 45.384
## -----
## P_F
##      n missing distinct      Info      Mean      Gmd      .05      .10
##   18662     353   5356      1     2.095    1.982    0.025    0.175
##      .25      .50      .75      .90      .95
##     0.727    1.619    2.871    4.424    5.762
##
## lowest :  0.000  0.001  0.002  0.003  0.004, highest: 20.696 22.810 23.365 24.635 25.172
## -----

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```

## NETRAD
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    16322    2693    16321        1     81.5    69.64   -7.053    1.438
##      .25      .50      .75      .90      .95
##    25.833    83.546   131.353   160.143   175.072
##
## lowest : -67.89401 -62.49031 -59.65575 -57.19109 -52.67848
## highest: 287.13336 296.88608 301.63435 307.46765 307.99158
## -----
## NEE_VUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015        0    18934        1   -0.6366    2.187  -4.91723  -3.42104
##      .25      .50      .75      .90      .95
##   -1.49466  -0.03468   0.63834   1.31770   1.80338
##
## lowest : -14.02970 -13.83060 -13.71760 -13.37000 -13.29610
## highest:   7.01448   7.44355   8.05616   8.71916   8.81725
## -----
## NEE_VUT_REF_QC
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015        0    1002        1    0.9561   0.04623   0.8548   0.8905
##      .25      .50      .75      .90      .95
##    0.9395    0.9718    0.9886    0.9965    0.9987
##
## lowest : 0.431452 0.461022 0.501344 0.556452 0.614247
## highest: 0.999256 0.999282 0.999306 0.999328 1.000000
## -----
## NEE_CUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015        0    18907        1   -0.6406    2.185  -4.90614  -3.42255
##      .25      .50      .75      .90      .95
##   -1.48760  -0.03645   0.63756   1.31050   1.78472
##
## lowest : -14.08820 -13.90990 -13.83730 -13.43980 -13.34270
## highest:   7.05364   7.41292   7.49866   7.82519   8.75457
## -----
## NEE_CUT_REF_QC
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015        0     883        1    0.9576   0.04409   0.8594   0.8931
##      .25      .50      .75      .90      .95
##    0.9415    0.9724    0.9886    0.9965    0.9987
##
## lowest : 0.800287 0.800403 0.800694 0.801075 0.801339
## highest: 0.999256 0.999282 0.999306 0.999328 1.000000
## -----
## GPP_NT_VUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015        0    18855        1    3.634    4.11  -0.06870   0.01167
##      .25      .50      .75      .90      .95
##    0.40645   2.28575   6.06953   9.34163  11.16933
##
## lowest : -0.999454 -0.951902 -0.941732 -0.939231 -0.928428
## highest: 23.035600 23.229300 23.253600 23.286900 23.775600
## -----

```

```

## GPP_DT_VUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0    18583        1    3.516    3.896  0.01442  0.06147
##      .25      .50      .75      .90      .95
##    0.43092  2.24238  5.82667  9.00748 10.62423
##
## lowest : 0.00000000 0.00000467 0.00000486 0.00001580 0.00001890
## highest: 23.29540000 23.39650000 23.41760000 23.79160000 24.06010000
## -----
## GPP_NT_CUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0    18860        1    3.627    4.103 -0.06668  0.01335
##      .25      .50      .75      .90      .95
##    0.40735  2.27758  6.06802  9.31733 11.14000
##
## lowest : -1.223370 -1.059510 -1.044810 -1.032150 -0.955025
## highest: 22.793300 23.322800 23.347500 23.525300 23.888800
## -----
## GPP_DT_CUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0    18534        1    3.512    3.884  0.01458  0.06359
##      .25      .50      .75      .90      .95
##    0.43464  2.25236  5.81980  8.97261 10.60416
##
## lowest : 0.00000000 0.00000899 0.00000974 0.00001060 0.00001940
## highest: 23.02800000 23.37300000 23.73030000 24.07310000 24.78880000
## -----
## RECO_NT_VUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0    18770        1    2.986    2.749  0.1946  0.4017
##      .25      .50      .75      .90      .95
##    0.9853   2.2191   4.3961   6.5565   8.1156
##
## lowest : 0.00000e+00 3.49000e-09 4.47000e-09 3.42000e-08 4.04000e-08
## highest: 1.86266e+01 1.86878e+01 1.91984e+01 1.95403e+01 1.96794e+01
## -----
## RECO_DT_VUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19014      1    18816        1    2.931    2.611  0.2957  0.4771
##      .25      .50      .75      .90      .95
##    1.0106   2.2123   4.3329   6.3974   7.7122
##
## lowest : 1.94896e-04 4.33736e-03 4.45924e-03 4.84733e-03 5.38437e-03
## highest: 1.51963e+01 1.53055e+01 1.62103e+01 1.73310e+01 1.77965e+01
## -----
## RECO_NT_CUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0    18794        1    2.965    2.735  0.1890  0.3946
##      .25      .50      .75      .90      .95
##    0.9733   2.2060   4.3738   6.5235   8.1121
##
## lowest : 0.00000e+00 3.49000e-09 4.47000e-09 3.49000e-08 4.04000e-08
## highest: 1.87690e+01 1.91544e+01 1.95403e+01 1.95475e+01 1.97785e+01
## -----

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```

## RECO_DT_CUT_REF
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19014      1    18813      1    2.916    2.6    0.2936    0.4734
##      .25      .50      .75      .90      .95
##    1.0060    2.1998    4.3056    6.3702    7.6631
##
## lowest : 0.00433736 0.00445924 0.00511637 0.00725787 0.00790458
## highest: 15.33190000 15.48180000 16.39560000 17.53900000 17.79650000
## -----
## time
##      n missing distinct
##    19015      0    240
##
## lowest : 1/31/01 1/31/02 1/31/03 1/31/04 1/31/05
## highest: 9/30/16 9/30/17 9/30/18 9/30/19 9/30/20
## -----
## ET
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18983      32    18337      1    3.666    3.227    0.1080    0.2531
##      .25      .50      .75      .90      .95
##    1.2016    3.1427    5.6596    7.6979    8.9099
##
## lowest : 0.00000000 0.0000105 0.0000108 0.0000121 0.0000148
## highest: 14.3170140 14.5098940 14.6386310 14.7813740 14.8986400
## -----
## BESS-PAR
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0    415      1    79.33    56.64    12      18
##      .25      .50      .75      .90      .95
##      39      77    106    129    145
##
## lowest : 0 1 2 3 4, highest: 588 597 599 600 611
## -----
## BESS-PARdiff
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0    216      1    33.85    22.54      7    10
##      .25      .50      .75      .90      .95
##      18      32    45     52     56
##
## lowest : 0 1 2 3 4, highest: 226 232 235 240 241
## -----
## BESS-RSDN
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0    374      1    157.8    100.8    25     37
##      .25      .50      .75      .90      .95
##      81     163    225    271    301
##
## lowest : 0 1 2 3 4, highest: 369 370 371 372 373
## -----
## CSIF-SIFdaily
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18894     121    17919      1    0.1517    0.1517 -0.000505 0.010790
##      .25      .50      .75      .90      .95
##    0.041752 0.102851 0.235123 0.370362 0.440347

```

```

##
## lowest : -0.02919996 -0.02814803 -0.02656131 -0.02655265 -0.02044134
## highest: 0.68423855 0.68502396 0.68649540 0.69930070 0.70735025
## -----
## CSIF-SIFinst
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18894      121      17772        1    0.4234    0.3902 -0.002229  0.036781
##      .25      .50      .75      .90      .95
##    0.148847  0.322552  0.641604  0.962354  1.140990
##
## lowest : -0.11166026 -0.10104087 -0.09271585 -0.08875447 -0.08076532
## highest: 1.72390760 1.73143880 1.75219540 1.75410040 1.79071280
## -----
## PET
##      n missing distinct      Info      Mean      Gmd      .05
##    18914      101      17748        1 -0.007306  0.006741 -0.0222709
##      .10      .25      .50      .75      .90      .95
## -0.0164077 -0.0091421 -0.0055377 -0.0026242 -0.0011704 -0.0007637
##
## lowest : -0.05542774 -0.05510548 -0.05494109 -0.05482972 -0.05447997
## highest: 0.00003210 0.00003400 0.00003460 0.00003720 0.00004160
## -----
## Ts
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18914      101      17589        1    283.6    12.11    265.3    269.6
##      .25      .50      .75      .90      .95
##    276.3    284.2    291.0    297.7    300.6
##
## lowest : 239.4686 239.6578 242.1032 242.7621 243.2340
## highest: 309.3234 309.5114 309.7074 310.0883 310.2855
## -----
## Tmean
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18914      101      17565        1    283.6    11.13    266.4    270.7
##      .25      .50      .75      .90      .95
##    277.0    284.3    290.7    296.2    298.9
##
## lowest : 241.8833 244.6789 245.3720 245.4935 245.5205
## highest: 305.7779 305.7994 305.8423 306.1157 306.8248
## -----
## prcp
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18914      101      17622        1  0.002451  0.002055  0.0001412  0.0004147
##      .25      .50      .75      .90      .95
## 0.0010851 0.0020328 0.0032729 0.0047820 0.0060673
##
## lowest : 0.000000540 0.000000555 0.000000586 0.000000608 0.000000623
## highest: 0.022791667 0.022880048 0.023600347 0.023827540 0.023946350
## -----
## vpd
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18914      101      17821        1    0.5254    0.5012  0.06597  0.09283
##      .25      .50      .75      .90      .95
##    0.17472  0.37054  0.65985  1.18798  1.64899

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```

##
## lowest : 0.01310228 0.01468146 0.01750002 0.01795330 0.01799651
## highest: 3.59606310 3.80632110 3.86339000 3.94436570 4.21067430
## -----
## prcp-lag3
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18914      101      17805          1 0.007331 0.005093 0.001072 0.002054
##      .25      .50      .75      .90      .95
## 0.004168 0.006535 0.009392 0.012903 0.015871
##
## lowest : 0.00000211 0.00000229 0.00000244 0.00000257 0.00000261
## highest: 0.05334827 0.05434239 0.05618351 0.06139616 0.06408255
## -----
## ESACCI-sm
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    17405      1610      13985          1 0.2566 0.07281 0.1339 0.1658
##      .25      .50      .75      .90      .95
## 0.2168 0.2650 0.3011 0.3332 0.3529
##
## lowest : 0.00000838 0.04904429 0.05008446 0.05073670 0.05515835
## highest: 0.41661453 0.41684616 0.41879398 0.41975582 0.42007230
## -----
## MODIS_LC
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015          0          14      0.98      7.97      4.218          1          1
##      .25      .50      .75      .90      .95
##      5          9          11      12      12
##
## lowest : 1 2 4 5 6, highest: 11 12 13 16 17
##
## Value      1      2      4      5      6      7      8      9      10      11      12
## Frequency  1973    306   1576   2032    99   894   2612   2475   2145    173   4197
## Proportion 0.104 0.016 0.083 0.107 0.005 0.047 0.137 0.130 0.113 0.009 0.221
##
## Value      13      16      17
## Frequency    73      8    452
## Proportion 0.004 0.000 0.024
## -----
## b1
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18609      406      16720          1 0.08678 0.06897 0.02623 0.03014
##      .25      .50      .75      .90      .95
## 0.04208 0.06154 0.09900 0.17116 0.23396
##
## lowest : 0.01132731 0.01195806 0.01283010 0.01378667 0.01388188
## highest: 0.87467510 0.88530600 0.88612750 0.88924116 0.92057824
## -----
## b2
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18616      399      16698          1 0.2466 0.08636 0.1413 0.1625
##      .25      .50      .75      .90      .95
## 0.1933 0.2371 0.2930 0.3506 0.3789
##
## lowest : 0.00000000 0.04759337 0.06271509 0.06848542 0.07399469

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## highest: 0.80770830 0.81104064 0.81478095 0.82439053 0.87086660
## -----
## b3
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18609      406      16481        1 0.05725 0.05532 0.01485 0.01771
##      .25      .50      .75      .90      .95
##    0.02400 0.03386 0.05265 0.09979 0.21867
##
## lowest : 0.005035000 0.005451613 0.005491508 0.005632258 0.005638444
## highest: 0.895115100 0.900761300 0.905036800 0.907366600 0.912842900
## -----
## b4
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18609      406      16622        1 0.08417 0.0584 0.03395 0.03839
##      .25      .50      .75      .90      .95
##    0.04768 0.06319 0.08669 0.14148 0.22247
##
## lowest : 0.01439973 0.01603387 0.01698667 0.01717167 0.01735941
## highest: 0.89055990 0.90379600 0.90579194 0.90936625 0.92817160
## -----
## b5
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18609      406      16848        1 0.2514 0.07687 0.1468 0.1652
##      .25      .50      .75      .90      .95
##    0.2011 0.2482 0.3031 0.3396 0.3598
##
## lowest : 0.08006774 0.08352830 0.08360645 0.08491613 0.08497245
## highest: 0.55240756 0.55939680 0.56861960 0.57122743 0.57889880
## -----
## b6
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18609      406      16863        1 0.1827 0.08793 0.07019 0.08663
##      .25      .50      .75      .90      .95
##    0.12622 0.17331 0.22305 0.29727 0.33825
##
## lowest : 0.03550000 0.03616667 0.03626785 0.03670000 0.03746371
## highest: 0.58307330 0.58979195 0.59474194 0.60415970 0.61979750
## -----
## b7
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18609      406      16810        1 0.1064 0.07094 0.03249 0.04020
##      .25      .50      .75      .90      .95
##    0.05883 0.08849 0.13167 0.20513 0.25483
##
## lowest : 0.01204138 0.01282143 0.01320000 0.01405893 0.01506290
## highest: 0.50048065 0.50056000 0.51021450 0.52273680 0.55494900
## -----
## EVI
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    17395      1620      15854        1 0.3024 0.1415 0.1212 0.1479
##      .25      .50      .75      .90      .95
##    0.2117 0.2825 0.3834 0.4834 0.5426
##
## lowest : 0.007224556 0.008124289 0.009238364 0.014921306 0.014974085

```

```

## highest: 0.730268500 0.735327700 0.738576300 0.739212300 0.758484800
## -----
## GCI
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18546      469      16926          1      2.908      1.752      0.6390      0.9973
##      .25      .50      .75      .90      .95
##    1.7987      2.7476      3.8548      4.9870      5.7303
##
## lowest : 0.004437923 0.006397247 0.007219228 0.010492164 0.012310988
## highest: 9.911120000 9.975493000 10.064940000 10.871304500 11.263188000
## -----
## NDVI
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18563      452      16928          1      0.5351      0.2271      0.1612      0.2197
##      .25      .50      .75      .90      .95
##    0.4054      0.5700      0.6912      0.7745      0.8116
##
## lowest : 0.002544436 0.005292194 0.005326130 0.005357474 0.007510734
## highest: 0.914746340 0.914772150 0.915391200 0.915637900 0.915831740
## -----
## NDWI
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18609      406      16984          1      0.1658      0.2224     -0.14604     -0.10814
##      .25      .50      .75      .90      .95
##    0.02816      0.16970      0.28347      0.37611      0.57355
##
## lowest : -0.2761985 -0.2730416 -0.2723996 -0.2689405 -0.2687093
## highest: 0.8205857 0.8271840 0.8343591 0.8380104 0.8547556
## -----
## NIRv
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18563      452      16928          1      0.1316      0.08005      0.03988      0.05013
##      .25      .50      .75      .90      .95
##    0.07697      0.11663      0.17518      0.23585      0.27508
##
## lowest : 0.001237986 0.001943630 0.002343579 0.002388369 0.002575980
## highest: 0.411172300 0.418155250 0.419231680 0.424213470 0.426510000
## -----
## kNDVI
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18609      406      16979          1      0.3057      0.2001      0.02509      0.04672
##      .25      .50      .75      .90      .95
##    0.16543      0.31532      0.44439      0.53669      0.57734
##
## lowest : 0.0000157 0.0000592 0.0000652 0.0000662 0.0000839
## highest: 0.6840645 0.6840799 0.6846792 0.6849552 0.6851109
## -----
## Percent_Snow
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18872      143      3426      0.618      11.62      19.92      0.000      0.000
##      .25      .50      .75      .90      .95
##    0.000      0.000      1.171      54.613      90.077
##
## lowest : 0.000000e+00 5.093379e-03 5.376344e-03 5.555556e-03 5.639098e-03

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## highest: 9.988625e+01 9.989286e+01 9.990323e+01 9.993731e+01 1.000000e+02
## -----
## Fpar
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18080      935      86          1    0.4845    0.2297    0.14    0.19
##      .25      .50      .75      .90      .95
##      0.33      0.50      0.65      0.74      0.79
##
## lowest : 0.06 0.07 0.08 0.09 0.10, highest: 0.87 0.88 0.89 0.90 0.91
## -----
## Lai
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    18080      935      63    0.998    1.431    1.214    0.2    0.3
##      .25      .50      .75      .90      .95
##      0.5      1.1      2.1      3.1      3.7
##
## lowest : 0.1 0.2 0.3 0.4 0.5, highest: 5.9 6.0 6.1 6.2 6.3
## -----
## LST_Day
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0      3279          1    289.8    15.47    266.7    271.7
##      .25      .50      .75      .90      .95
##    280.4    290.9    298.5    307.0    312.9
##
## lowest : 238.54 241.24 242.12 242.84 243.24, highest: 327.64 327.90 327.92 328.08 328.28
## -----
## LST_Night
##      n missing distinct      Info      Mean      Gmd      .05      .10
##    19015      0      2375          1    277.2    10.87    260.0    264.5
##      .25      .50      .75      .90      .95
##    271.2    277.9    284.2    288.9    292.1
##
## lowest : 237.90 238.14 238.66 238.68 238.76, highest: 299.12 299.26 299.28 299.32 299.34
## -----
## MODIS_IGBP
##      n missing distinct
##    19015      0      14
##
## lowest : BSV CRO CSH DBF EBF, highest: SAV URB WAT WET WSA
##
## Value      BSV  CRO  CSH  DBF  EBF  ENF  GRA  MF  OSH  SAV  URB
## Frequency      8 4197  99 1576  306 1973 2145 2032  894 2475  73
## Proportion 0.000 0.221 0.005 0.083 0.016 0.104 0.113 0.107 0.047 0.130 0.004
##
## Value      WAT  WET  WSA
## Frequency    452  173 2612
## Proportion 0.024 0.009 0.137
## -----
## MODIS_PFT
##      n missing distinct
##    19015      0      9
##
## lowest : CRO  DBF  EBF  ENF  GRA , highest: GRA  MF  Other SA  SH
##

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## Value      CRO   DBF   EBF   ENF   GRA   MF Other   SA   SH
## Frequency  4197  1576   306  1973  2145  2032   706  5087  993
## Proportion 0.221 0.083 0.016 0.104 0.113 0.107 0.037 0.268 0.052
## -----
## koppen_sub
##      n missing distinct
##   19015      0      21
##
## lowest : Af  Am  Aw  BSh BSk, highest: Dsc Dwa Dwb Dwc ET
## -----
## koppen
##      n missing distinct
##   19015      0      5
##
## lowest : Arid      Cold      Polar      Temperate Tropical
## highest: Arid      Cold      Polar      Temperate Tropical
##
## Value      Arid      Cold      Polar Temperate Tropical
## Frequency   1957   11013      299      5102      644
## Proportion  0.103   0.579   0.016   0.268   0.034
## -----
## CO2_concentration
##      n missing distinct      Info      Mean      Gmd      .05      .10
##   19015      0      238      1   390.3   12.92   373.0   375.7
##      .25      .50      .75      .90      .95
##   381.5   389.3   398.2   406.3   409.9
##
## lowest : 369.070 369.330 369.415 369.560 369.745
## highest: 412.435 412.715 412.780 413.135 413.325
## -----

```