File: spcd.csv
Columns:

Name	Definition	Data type
spcd	An FIA tree species code. Refer to Appendix F for codes.	Integer
common_name	Species common name	String
genus	Genus of species	String
species	Species of species	String

```
  spcd         common_name          genus               species
Min.   :  10   alaa     :   4   Quercus   :  75   spp.          : 270
1st Qu.:6214   olioli   :   4   Pinus     :  58   americana     :  17
Median :7146   ongor    :   4   Melicope  :  40   portoricensis:  17
Mean   :6261   date palm:   3   Eugenia   :  37   sandwicensis :  14
3rd Qu.:8104   Dubautia :   3   Pandanus  :  37   racemosa      :  12
Max.   :8947   kesiamel :   3   Eucalyptus:  32   samoensis     :  12
       (Other)  :2631   (Other)   :2373   (Other)      :2310
```

Number of species: 2652
Number of genera: 749

File: response_fia.csv

Columns:

Name	Definition	Data type
ct	Number of species in plot.	Integer
countycd	County code. Refer to appendix C.	Integer
plot	Phase 2 plot number. An identifier for a plot.	Integer
invyr	Calendar year when the data was collected	Integer
spcd	An FIA tree species code. Refer to Appendix F for codes.	Integer
statecd	State code. Two-digit code for each state.	Integer
unitcd	Survey unit code. FIA survey unit identification number.	Integer

```
ct              spcd            statecd          unitcd         countycd          plot           invyr
Min.   :  4.00   Min.   :  11.0   Min.   : 1.00   Min.   :0.000   Min.   :  1.00   Min.   :    1   Min.   :1998
1st Qu.: 10.00   1st Qu.: 108.0   1st Qu.:21.00   1st Qu.:1.000   1st Qu.: 23.00   1st Qu.:   94   1st Qu.:2010
Median : 16.00   Median : 202.0   Median :32.00   Median :2.000   Median : 49.00   Median :20177   Median :2012
Mean   : 20.39   Mean   : 301.4   Mean   :31.05   Mean   :2.906   Mean   : 71.39   Mean   :34305   Mean   :2020
3rd Qu.: 26.00   3rd Qu.: 403.0   3rd Qu.:45.00   3rd Qu.:4.000   3rd Qu.: 97.00   3rd Qu.:80302   3rd Qu.:2014
Max.   :175.00   Max.   :8514.0   Max.   :56.00   Max.   :9.000   Max.   :810.00   Max.   :99997   Max.   :9999
```

Max year: 2014

Most common by entry: 202, Douglas-fir, Pseudotsuga, menziesii #disagrees with Google
#Google --> *Acer rubrum*

Most common by total count:

Spcd	Genus	Species	Total Count
131	Pinus	taeda	217500
202	Pseudotsuga	menziesii	155350
108	Pinus	contorta	93357
316	Acer	rubrum	77945
122	Ponderosa	pine	64304

Number of rows: 83870

File: climate_fia.csv

Name	Definition	Data type
aspect	Subplot aspect. The direction of slope, to the nearest degree, of the subplot, determined along the direction of slope. North is recorded as 360. When slope is less than 5 percent, there is no aspect; is recorded as 000.	Integer
carbon_soil_org	FIA modeled carbon in soil organic matter (Mg/ha)	Integer
countycd	County code. Refer to appendix C.	Integer
elev	Elevation. The distance the plot is located above sea level, recorded in feet (NAD 83 datum). Negative values indicate distance below sea level. The ELEV is based on fuzzed and swapped plot coordinates.	Integer
invyr	Calendar year when the data was collected	Integer
lat	Latitude NAD 83 datum. The approximate latitude of the plot in decimal degrees. The precision of this item along the meridian is ± 1542 m at latitude 45 degrees north. Based on fuzzed and swapped plot coordinates.	Integer
lon	Longitude NAD 83 datum. The approximate longitude of the plot in decimal degrees. The precision of this item along the parallel is ± 1094 m at latitude 45 degrees. Based on fuzzed and swapped plot coordinates.	Integer
physclcd	Physiographic class code. The general effect of land form, topographical position, and soil on moisture available to trees.	Integer
plot	Phase 2 plot number. An identifier for a plot.	Integer
slope	The angle of slope, in percent, of the condition. Valid values are 000 through 155 for data collected in 1999 and after, and 000 through 200 on data collected before 1999.	Integer
statecd	State code. Two-digit code for each state.	Integer
unitcd	Survey unit code. FIA survey unit identification number.	Integer
watercd	Water on plot code. Water body less than 1 acre in size or a stream less than 30 feet wide that has the greatest impact on the area within the forest land portion of the four subplots. The coding hierarchy is listed in order from large permanent water to temporary water. New in annual inventory.	Integer

Physiographic - Code Description
Xeric sites (normally low or deficient in available moisture)
11 - 19

Mesic Sites (normally moderate but adequate available moisture)
21 - 29

Hydric Sites (normally abundant or overabundant moisture all year)
31 - 39

watercd - Code Description
0 None - no water sources within the accessible forest land CONDITION CLASS

1 Permanent streams or ponds too small to qualify as noncensus water

2 Permanent water in the form of deep swamps, bogs, marshes without standing trees present and less than 1.0 ac in size, or with standing trees

3 Ditch/canal – human made channels used as a means of moving water, e.g., for irrigation or drainage, which are too small to qualify as noncensus water

4 Temporary streams

5 Flood zones – evidence of flooding when bodies of water exceed their natural banks

9 Other temporary water – specified in plot-level notes.

statecd	unitcd	countycd	plot	lat	lon	slope	aspect
Min. : 1.00	Min. :0.000	Min. : 1.00	Min. : 1	Min. :24.67	Min. :-153.86	Min. : 0.00	Min. : 0.0
1st Qu.:17.00	1st Qu.:1.000	1st Qu.: 23.00	1st Qu.: 82	1st Qu.:35.14	1st Qu.:-113.97	1st Qu.: 1.00	1st Qu.: 0.0
Median :30.00	Median :3.000	Median : 51.00	Median :20201	Median :40.61	Median : -92.69	Median : 10.00	Median : 90.0
Mean :30.59	Mean :2.929	Mean : 74.46	Mean :34697	Mean :40.32	Mean : -97.72	Mean : 18.05	Mean :122.4
3rd Qu.:45.00	3rd Qu.:4.000	3rd Qu.:101.00	3rd Qu.:80564	3rd Qu.:45.27	3rd Qu.: -84.07	3rd Qu.: 28.00	3rd Qu.:233.0
Max. :56.00	Max. :9.000	Max. :810.00	Max. :99997	Max. :61.47	Max. : -67.04	Max. :155.00	Max. :360.0

elev	carbon_soil_org	watercd	physclcd	invyr
Min. : -10	Min. : 8.78	Min. :0.0000	Min. :11.0	Min. :1998
1st Qu.: 600	1st Qu.: 18.62	1st Qu.:0.0000	1st Qu.:21.0	1st Qu.:2010
Median : 1340	Median : 23.68	Median :0.0000	Median :22.0	Median :2012
Mean : 2579	Mean : 32.48	Mean :0.6913	Mean :20.7	Mean :2020
3rd Qu.: 4300	3rd Qu.: 42.27	3rd Qu.:0.0000	3rd Qu.:22.0	3rd Qu.:2014
Max. :12330	Max. :116.79	Max. :9.0000	Max. :39.0	Max. :9999

Number of rows: 64519

File: climate_daymet.csv

Name	Definition	Data type	Unit
ID	Row identifier	Integer	
LAT	Latitude.	Float	
LON	Longitude.	Float	
countycd	County code. Refer to appendix C.	Integer	
daylength_X	Average duration of the daylight period in seconds per day for month X.	Float	s/day
plot	Phase 2 plot number. An identifier for a plot.	Integer	
prec_X	Average daily total precipitation in millimeters per day, sum of all forms converted to water-equivalent for month X.	Float	mm/day
rad_X	Average incident shortwave radiation flux density in watts per square meter, taken as an average over the daylight period of the day for month X.	Float	W/m^2
snow_melt_X	Average snow water equivalent in kilograms per square meter for month X.	Float	kg/m^2
statecd	State code. Two-digit code for each state.	Float	
tmax_X	Average daily maximum 2-meter air temperature in degrees Celsius for month X.	Float	degrees C
tmin_X	Average daily minimum 2-meter air temperature in degrees Celsius for month X.	Float	degrees C
unitcd	Survey unit code. FIA survey unit identification number.	Integer	
vp_X	Average of daily average partial pressure of water vapor for month X.	Float	Pa

Number of rows: 814740
Number of plots: 54315
average over 30 years

```
  countycd          unitcd         statecd           plot            LAT             LON
 Min.   :  1.00   Min.   :1.000   Min.   : 1.00   Min.   :    1   Min.   :17.68   Min.   :-160.24
 1st Qu.: 15.00   1st Qu.:2.000   1st Qu.: 4.00   1st Qu.: 1946   1st Qu.:33.98   1st Qu.:-110.39
 Median : 39.00   Median :2.000   Median :22.00   Median :21429   Median :35.54   Median :-102.37
 Mean   : 67.48   Mean   :2.571   Mean   :24.04   Mean   :39596   Mean   :37.16   Mean   : -99.47
 3rd Qu.: 99.00   3rd Qu.:3.000   3rd Qu.:39.00   3rd Qu.:89151   3rd Qu.:40.20   3rd Qu.: -87.06
 Max.   :810.00   Max.   :9.000   Max.   :78.00   Max.   :99999   Max.   :61.52   Max.   : -64.57
    ID          daylength_1     daylength_2     daylength_3     daylength_4     daylength_5
 Min.   :     1   Min.   :21706   Min.   :30794   Min.   :41416   Min.   :44732   Min.   :46232
 1st Qu.: 41055   1st Qu.:34159   1st Qu.:37706   1st Qu.:42386   1st Qu.:46437   1st Qu.:49677
 Median :202816   Median :35608   Median :38552   Median :42509   Median :46644   Median :50079
 Mean   :236012   Mean   :34971   Mean   :38199   Mean   :42458   Mean   :46910   Mean   :50638
 3rd Qu.:399785   3rd Qu.:36043   3rd Qu.:38838   3rd Qu.:42553   3rd Qu.:47278   3rd Qu.:51372
 Max.   :577578   Max.   :39844   Max.   :41138   Max.   :42899   Max.   :52289   Max.   :62286
  daylength_6     daylength_7     daylength_8     daylength_9     daylength_10    daylength_11
 Min.   :46967   Min.   :46567   Min.   :45229   Min.   :43442   Min.   :33869   Min.   :23823
 1st Qu.:51241   1st Qu.:50391   1st Qu.:47514   1st Qu.:43718   1st Qu.:38975   1st Qu.:34917
 Median :51748   Median :50837   Median :47771   Median :43753   Median :39621   Median :36242
 Mean   :52462   Mean   :51469   Mean   :48134   Mean   :43794   Mean   :39348   Mean   :35662
 3rd Qu.:53395   3rd Qu.:52275   3rd Qu.:48618   3rd Qu.:43845   3rd Qu.:39822   3rd Qu.:36645
 Max.   :68095   Max.   :64806   Max.   :55296   Max.   :44640   Max.   :41617   Max.   :40136
  daylength_12       prec_1            prec_2            prec_3            prec_4
 Min.   :18294   Min.   :  3.429   Min.   :  3.429   Min.   :  2.667   Min.   :  0.3333
 1st Qu.:33005   1st Qu.: 36.381   1st Qu.: 36.191   1st Qu.: 37.809   1st Qu.: 29.5714
 Median :34641   Median : 68.667   Median : 63.952   Median : 50.191   Median : 62.5714
 Mean   :33929   Mean   : 73.580   Mean   : 67.894   Mean   : 72.340   Mean   : 69.8548
 3rd Qu.:35148   3rd Qu.:102.381   3rd Qu.:100.095   3rd Qu.:112.143   3rd Qu.:106.6667
 Max.   :39421   Max.   :807.762   Max.   :590.952   Max.   :723.905   Max.   :622.6190
    prec_5            prec_6            prec_7            prec_8            prec_9
 Min.   :  0.00   Min.   :  0.00   Min.   :  0.00   Min.   :  0.00   Min.   :  0.3333
 1st Qu.: 15.81   1st Qu.: 16.14   1st Qu.: 63.88   1st Qu.: 58.24   1st Qu.: 48.5714
 Median : 75.71   Median : 81.24   Median :100.29   Median : 90.90   Median : 59.2857
 Mean   : 72.81   Mean   : 74.71   Mean   : 95.92   Mean   : 88.86   Mean   : 76.1513
 3rd Qu.:114.67   3rd Qu.:119.90   3rd Qu.:135.24   3rd Qu.:117.62   3rd Qu.: 99.8095
 Max.   :468.95   Max.   :470.19   Max.   :600.29   Max.   :641.14   Max.   :982.8571
   prec_10           prec_11           prec_12           rad_1             rad_2             rad_3
 Min.   :  2.524   Min.   :  2.238   Min.   :  3.00   Min.   : 21.64   Min.   : 69.51   Min.
:134.2
 1st Qu.: 36.191   1st Qu.: 34.809   1st Qu.: 40.71   1st Qu.:229.08   1st Qu.:299.99   1st
Qu.:367.4
 Median : 60.571   Median : 44.429   Median : 64.48   Median :254.94   Median :317.68   Median
:386.4
 Mean   : 69.801   Mean   : 65.687   Mean   : 76.44   Mean   :258.07   Mean   :326.09   Mean
:407.3
```

```
 3rd Qu.: 94.762   3rd Qu.: 97.905   3rd Qu.:110.62   3rd Qu.:299.22   3rd Qu.:359.30   3rd
Qu.:441.7
 Max.   :985.191   Max.   :803.048   Max.   :717.00   Max.   :462.60   Max.   :500.77   Max.
:600.9
   rad_4            rad_5            rad_6            rad_7            rad_8            rad_9
 Min.   :218.2   Min.   :228.4   Min.   :218.1   Min.   :204.1   Min.   :185.8   Min.   :111.3
 1st Qu.:407.2   1st Qu.:400.6   1st Qu.:390.3   1st Qu.:383.8   1st Qu.:379.9   1st Qu.:353.5
 Median :428.8   Median :426.0   Median :412.1   Median :416.8   Median :396.5   Median :370.4
 Mean   :453.5   Mean   :459.0   Mean   :447.6   Mean   :414.5   Mean   :405.6   Mean   :377.0
 3rd Qu.:484.5   3rd Qu.:519.0   3rd Qu.:525.0   3rd Qu.:433.0   3rd Qu.:431.9   3rd Qu.:417.6
 Max.   :660.8   Max.   :723.4   Max.   :745.6   Max.   :700.0   Max.   :678.1   Max.   :596.3
   rad_10           rad_11           rad_12          snow_melt_1        snow_melt_2
 Min.   : 65.21   Min.   : 25.98   Min.   :  9.224   Min.   :   0.000   Min.   :   0.000
 1st Qu.:290.27   1st Qu.:223.19   1st Qu.:193.067   1st Qu.:   1.309   1st Qu.:   1.452
 Median :320.64   Median :255.92   Median :223.746   Median :   5.407   Median :   5.727
 Mean   :315.05   Mean   :253.20   Mean   :225.417   Mean   :  22.285   Mean   :  30.368
 3rd Qu.:359.81   3rd Qu.:296.22   3rd Qu.:266.489   3rd Qu.:  29.770   3rd Qu.:  42.693
 Max.   :495.57   Max.   :448.50   Max.   :437.856   Max.   :1000.000   Max.   :1000.000
  snow_melt_3          snow_melt_4          snow_melt_5         snow_melt_6         snow_melt_7
 Min.   :   0.0000   Min.   :   0.0000   Min.   :   0.000   Min.   :   0.000   Min.   :   0.000
 1st Qu.:   0.3379   1st Qu.:   0.0000   1st Qu.:   0.000   1st Qu.:   0.000   1st Qu.:   0.000
 Median :   3.3978   Median :   0.0698   Median :   0.000   Median :   0.000   Median :   0.000
 Mean   :  34.7531   Mean   :  29.5581   Mean   :  18.073   Mean   :   8.241   Mean   :   3.858
 3rd Qu.:  43.5392   3rd Qu.:  20.5270   3rd Qu.:   2.863   3rd Qu.:   0.000   3rd Qu.:   0.000
 Max.   :1000.0000   Max.   :1000.0000   Max.   :1000.000   Max.   :1000.000   Max.   :1000.000
  snow_melt_8         snow_melt_9         snow_melt_10        snow_melt_11         snow_melt_12
 Min.   :   0.000   Min.   :   0.000   Min.   :   0.000   Min.   :   0.0000   Min.   :   0.0000
 1st Qu.:   0.000   1st Qu.:   0.000   1st Qu.:   0.000   1st Qu.:   0.0000   1st Qu.:   0.7937
 Median :   0.000   Median :   0.000   Median :   0.000   Median :   0.1587   Median :   3.2254
 Mean   :   2.311   Mean   :   1.726   Mean   :   1.846   Mean   :   4.3204   Mean   :  11.9827
 3rd Qu.:   0.000   3rd Qu.:   0.000   3rd Qu.:   0.129   3rd Qu.:   2.8508   3rd Qu.:  13.8476
 Max.   :1000.000   Max.   :1000.000   Max.   :1000.000   Max.   :1000.0000   Max.   :1000.0000
   tmax_1           tmax_2           tmax_3           tmax_4            tmax_5          tmax_6
 Min.   :-2.262   Min.   :-1.571   Min.   :-1.881   Min.   :-0.4286   Min.   :10.43   Min.   :13.95
 1st Qu.:12.262   1st Qu.:13.119   1st Qu.:16.262   1st Qu.:22.2619   1st Qu.:27.26   1st Qu.:30.45
 Median :16.214   Median :18.381   Median :22.452   Median :25.7857   Median :30.67   Median :33.90
 Mean   :15.580   Mean   :17.018   Mean   :21.721   Mean   :25.5253   Mean   :29.60   Mean   :32.76
 3rd Qu.:19.857   3rd Qu.:21.429   3rd Qu.:25.667   3rd Qu.:29.3333   3rd Qu.:32.02   3rd Qu.:34.83
 Max.   :32.452   Max.   :32.690   Max.   :35.524   Max.   :40.1905   Max.   :45.21   Max.   :48.98
   tmax_7           tmax_8           tmax_9          tmax_10           tmax_11          tmax_12
 Min.   :16.43   Min.   :17.10   Min.   :12.21   Min.   : 4.762   Min.   :-1.429   Min.   :-2.50
 1st Qu.:32.00   1st Qu.:31.05   1st Qu.:28.88   1st Qu.:23.381   1st Qu.:16.571   1st Qu.:12.79
 Median :34.64   Median :33.81   Median :31.60   Median :27.262   Median :21.524   Median :17.07
 Mean   :33.82   Mean   :32.93   Mean   :30.68   Mean   :26.508   Mean   :20.834   Mean   :15.96
 3rd Qu.:35.98   3rd Qu.:35.90   3rd Qu.:33.69   3rd Qu.:29.571   3rd Qu.:24.548   3rd Qu.:19.98
```

```
Max.   :49.74   Max.   :49.36   Max.   :46.95   Max.   :40.286   Max.   :34.333   Max.   :33.14
  tmin_1           tmin_2           tmin_3           tmin_4           tmin_5
Min.   :-49.90   Min.   :-49.333   Min.   :-49.524   Min.   :-47.1191   Min.   :-35.5714
1st Qu.:-17.81   1st Qu.:-16.238   1st Qu.:-13.429   1st Qu.: -8.5476   1st Qu.: -2.9048
Median :-13.50   Median :-11.381   Median : -7.738   Median : -4.7381   Median :  0.4286
Mean   :-14.54   Mean   :-12.633   Mean   : -9.146   Mean   : -3.6710   Mean   :  1.5297
3rd Qu.:-10.69   3rd Qu.: -8.357   3rd Qu.: -5.286   3rd Qu.:  0.1667   3rd Qu.:  5.8571
Max.   : 20.60   Max.   : 21.167   Max.   : 20.976   Max.   : 21.7143   Max.   : 22.9524
  tmin_6           tmin_7           tmin_8           tmin_9           tmin_10
Min.   :-33.548   Min.   :-32.071   Min.   :-33.74   Min.   :-37.6429   Min.   :-45.524
1st Qu.:  2.571   1st Qu.:  7.286   1st Qu.:  5.81   1st Qu.: -0.1667   1st Qu.: -6.929
Median :  6.429   Median : 11.238   Median : 10.40   Median :  4.2381   Median : -2.643
Mean   :  7.463   Mean   : 11.722   Mean   : 10.78   Mean   :  4.6703   Mean   : -2.321
3rd Qu.: 12.238   3rd Qu.: 15.500   3rd Qu.: 14.55   3rd Qu.:  7.8810   3rd Qu.:  0.500
Max.   : 23.929   Max.   : 25.524   Max.   : 24.00   Max.   : 23.6905   Max.   : 23.429
 tmin_11          tmin_12            vp_1             vp_2             vp_3
Min.   :-49.167   Min.   :-49.833   Min.   :  77.42   Min.   :  89.06   Min.   :  69.98
1st Qu.:-13.524   1st Qu.:-18.643   1st Qu.: 316.25   1st Qu.: 323.55   1st Qu.: 367.43
Median : -8.643   Median :-13.190   Median : 418.00   Median : 429.03   Median : 480.68
Mean   : -8.562   Mean   :-13.163   Mean   : 464.80   Mean   : 485.20   Mean   : 600.36
3rd Qu.: -4.667   3rd Qu.: -8.238   3rd Qu.: 567.86   3rd Qu.: 604.53   3rd Qu.: 816.96
Max.   : 22.119   Max.   : 21.429   Max.   :2803.38   Max.   :2774.12   Max.   :2710.11
   vp_4             vp_5             vp_6             vp_7             vp_8          vp_9
Min.   : 134.3   Min.   : 185.4   Min.   : 203.7   Min.   : 265.9   Min.   : 246   Min.   : 219.8
1st Qu.: 403.2   1st Qu.: 523.7   1st Qu.: 514.8   1st Qu.: 858.7   1st Qu.:1005   1st Qu.: 882.0
Median : 563.0   Median : 810.7   Median :1177.0   Median :1466.5   Median :1436   Median :1206.0
Mean   : 758.6   Mean   :1015.6   Mean   :1308.2   Mean   :1559.2   Mean   :1598   Mean   :1312.1
3rd Qu.:1110.4   3rd Qu.:1549.9   3rd Qu.:2034.4   3rd Qu.:2293.5   3rd Qu.:2202   3rd Qu.:1721.2
Max.   :2759.5   Max.   :2957.6   Max.   :3224.1   Max.   :3359.7   Max.   :3429   Max.   :3372.9
  vp_10            vp_11            vp_12
Min.   : 155.0   Min.   :  88.83   Min.   :  77.21
1st Qu.: 619.5   1st Qu.: 447.43   1st Qu.: 326.22
Median : 823.5   Median : 554.29   Median : 415.75
Mean   : 923.9   Mean   : 653.98   Mean   : 507.47
3rd Qu.:1143.7   3rd Qu.: 792.19   3rd Qu.: 628.76
Max.   :3280.1   Max.   :3086.54   Max.   :2910.79
```

--Every plot in daymet climate data is in response data

File: species_id_train.csv

Name	Definition	Data type
crown_id	Individual tree crown identification number.	Integer
genus	Tree's genus	String
genus_id	Genus abbreviation 2 letters	String
species	Tree's species	String
species_id	Species abbreviation. 4 letters	String

```
  crown_id                species            genus       species_id  genus_id
Min.   :  3.0   Pinus palustris :197   Acer       :  6   PIPA   :197   AC:  6
1st Qu.:157.0   Quercus laevis  : 54   Liquidambar:  4   QULA   : 54   LI:  4
Median :292.0   Pinus taeda     : 14   Other      :  8   PITA   : 14   OT:  3
Mean   :299.9   Quercus geminata: 12   Pinus      :216   QUGE   : 12   PI:218
3rd Qu.:450.0   Other species   :  8   Quercus    : 71   OTHER  :  8   QU: 74
Max.   :622.0   Acer rubrum     :  6                     ACRU   :  6
         (Other)         : 14                   (Other): 14
```

Number of crowns: 305
Number of unique species: 9

species	crown_id	genus	species_id	genus_id
Acer rubrum	6	6	6	6
Liquidambar styraciflua	4	4	4	4
Other species	8	8	8	8
Pinus elliottii	5	5	5	5
Pinus palustris	197	197	197	197
Pinus taeda	14	14	14	14
Quercus geminata	12	12	12	12
Quercus laevis	54	54	54	54
Quercus nigra	5	5	5	5

File: hyper_bands_train.csv

Name	Definition	Data type	Unit
crown_id	Individual tree crown identification number.	Integer	
chm	Crown height.	Float	m
band_X	Hyperspectral band reflectance (theoretically 0 - 1)	Float	unitless

Number of bands: 426
year: 2014

	crown_id	chm	band_1	band_2	band_3	band_4	band_5	...	band_420	band_421	band_422	band_423	band_424	band_425	band_426
count	6831.000000	6831.000000	6831.000000	6831.000000	6831.000000	6831.000000	6831.000000	...	6831.000000	6831.000000	6831.000000	6831.000000	6831.000000	6831.000000	6801.000000
mean	301.118577	12.997953	0.014755	0.017343	0.022372	0.019701	0.012751	...	0.068751	0.124246	0.208989	0.151700	0.146144	0.323573	0.824810
std	176.409013	5.405267	0.005785	0.005957	0.006608	0.006411	0.005578	...	0.025502	0.042697	0.071824	0.047763	0.045536	0.100260	0.241143
min	3.000000	0.000000	0.000000	0.002700	0.005300	0.002800	0.000100	...	0.004200	0.000000	0.000000	0.000000	0.015000	0.066000	0.182300
25%	158.000000	10.200000	0.010700	0.013200	0.017800	0.015400	0.009100	...	0.051600	0.095100	0.161450	0.118750	0.115400	0.260150	0.660800
50%	292.000000	13.440000	0.014100	0.016600	0.021400	0.018700	0.012000	...	0.065700	0.122500	0.206300	0.148700	0.142600	0.314700	0.799400
75%	450.000000	16.590000	0.018200	0.020800	0.026100	0.023150	0.015600	...	0.082800	0.150000	0.253350	0.181100	0.172700	0.377900	0.963900
max	622.000000	31.599998	0.047000	0.052400	0.063800	0.063100	0.052300	...	0.205300	0.357700	0.566300	0.340300	0.438200	1.257300	1.490500

--reflectance values larger than 1 noise

General Information on Challenge Data:

Data product	Description	Spatial resolution	Data format	NEON data product ID
RGB photographs	Raster data of the reflected energy from the surface as 3 bands representing the red, green, and blue portions of the spectrum.	0.065 m^2	GeoTiff (.tiff)	NEON.DOM.SITE.DP1.30010.001
LiDAR point cloud	3-dimensional spatial point data (X,Y, Z values) of the height of surface features and the ground.	6 points per m^2	.laz	NEON.DOM.SITE.DP1.30003.001
LiDAR canopy height model (CHM)	Raster data containing the height of the top of the vegetation canopy. Within the Ecosystem Structure NEON data products.	1 m^2	GeoTiff (.tiff)	NEON.DOM.SITE.DP3.30015.001
Hyperspectral surface reflectance	Raster data of reflected energy from the surface as 426 5-nm wide wavelength regions (“bands”) from 380-2510 nm.	1 m^2	GeoTiff (.tiff)	NEON.DOM.SITE.DP3.30006.003