We have 1100 rows and 14 columns.

**Inter canine distance: measured in mm**

**Evements and Datatype:**

RangeIndex: 1100 entries, 0 to 1099

Data columns (total 14 columns):

# Column Non-Null Count Dtype

--- ------ -------------- -----

0 Sl No 1100 non-null int64

1 Sample ID 0 non-null float64

2 Age 1100 non-null int64

3 Gender 1100 non-null object

4 inter canine distance intraoral 1100 non-null float64

5 intercanine distance casts 1100 non-null float64

6 right canine width intraoral 1100 non-null float64

7 right canine width casts 1100 non-null float64

8 left canine width intraoral 1100 non-null float64

9 left canine width casts 1100 non-null float64

10 right canine index intra oral 1100 non-null float64

11 right canine index casts 1100 non-null float64

12 left canine index intraoral 1100 non-null float64

13 left canine index casts 1100 non-null float64

dtypes: float64(11), int64(2), object(1)

**Age:**

|  |  |  |  |
| --- | --- | --- | --- |
| Minimum | Average | Maximum | Std Deviation |
| 18 | 21.62 | 25 | 2.08 |

**Exploring the Data:**

Replaced “Gender” with integer.

Sample ID column is empty. It does not have any data.

A picture containing shape

Description automatically generated

Maximum number of samples are from age 20 to 24.

Male and female ratio of almost equal.

Graphical user interface, application

Description automatically generated

Dropped: 'Sample ID' and 'Sl No' columns.

Now we have 1100 rows and 12 columns

**Count and percentage of Male and Female.**

* Total = 1100
* Number of Female samples = 550
* % Of Female samples = 50.0 %
* Total = 1100
* Number of Male samples = 550
* % Of Male samples = 50.0 %

**Comparison the mean and Std Deviation of male and female**.

* Average inter canine distance intraoral for Male is 26.436655 and for Female it’s 25.541364.
* Average inter canine distance casts for Male is 26.216436 and for Female it’s 25.543727.
* Average right canine width intraoral for Male is 6.774382 and for Female it’s 6.351618.
* Average right canine width casts for Male are 6.775091 and for Female it’s 6.353891.
* Average left canine width intraoral for Male are 6.904927 and for Female it’s 6.434327.
* Average left canine width casts for Male are 6.914818 and for Female it’s 6.435218.
* Average right canine index intra oral for Male are 0.256244 and for Female it’s 0.250000.
* Average right canine index casts for Male are 0.256158 and for Female it’s 0.248551.
* Average left canine index intraoral for Male are 0.261136 and for Female it’s 0.251769.
* Average left canine index casts for Male are 0.261087 and for Female it’s 0.251635.

**Correlations:**

**Calendar

Description automatically generated**

* Right canine width intraoral and right canine width casts is strongly correlated with left canine width intraoral and left canine width casts.
* Left canine width intraoral and left canine width casts is strongly correlated with right canine width intraoral and right canine width casts.
* Right canine index casts is strongly correlated with left canine index intraoral and left canine index casts.
* Left canine index intraoral and left canine index casts are strongly correlated with right canine index casts.
* Gender has positive correlation with right canine width intraoral, right canine width casts, left canine width intraoral and left canine width casts.

**KDE (Kernel Density Estimation) plot:**

This is to visualise the Probability Density of a continuous variable.

KDE describes the probability density at different values in a continuous variable.

**Right canine width intraoral:**

Red: Female and Blue: Male.

We can observe here for Male right canine width intraoral is from 6.0 to roughly 7.5.

For Female it’s 5.5 to 7.0 at most.

A picture containing chart

Description automatically generated

**Right Canine Width Casts:**

A picture containing logo

Description automatically generated

**Left Canine Width Intraoral:**

**Logo

Description automatically generated with medium confidence**

**Left Canine Width Casts:**

**Logo

Description automatically generated with low confidence**

Right canine width intraoral, right canine width casts and left canine width intraoral and left canine width casts size is higher for Male compared to Female.

**Gender Vs inter canine distance intraoral:**

0: Female and 1: Male.

**Chart, box and whisker chart

Description automatically generated**

**Gender Vs intercanine distance casts:**

0: Female and 1: Male.

**Chart, box and whisker chart

Description automatically generated**