# Assignment-01

Principles of Data Science-5530

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Plot 1:

The pie graph illustrates the distribution of ages within the dataset, with each slice representing a unique age category. The largest portion of the pie corresponds to the most prevalent age group, while smaller segments indicate less frequent age categories. This visualization offers a clear and concise overview of the age distribution within the dataset.

Distribution of Age
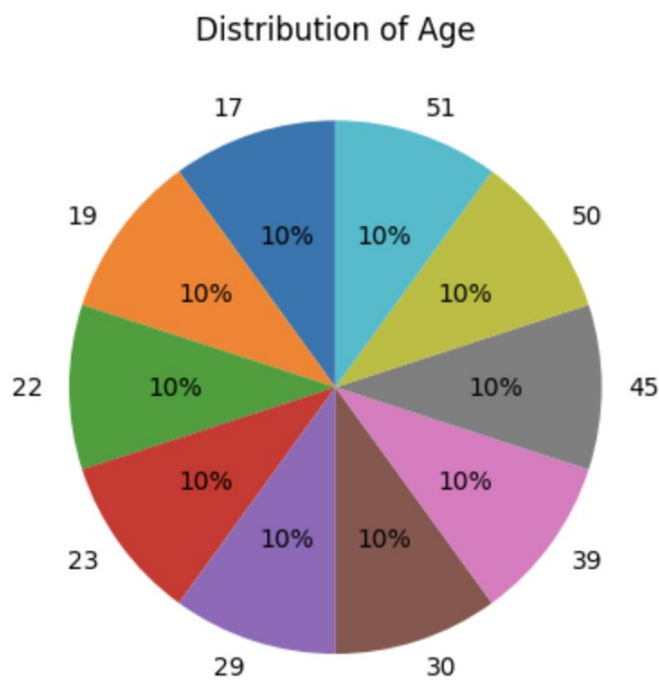
Plot 2:

The provided code generates a violin plot using Seaborn, which effectively showcases the distribution of ages across different levels of frailty within the dataset. The plot's width at each age level represents the density of data points, while the quartiles within the violins give insights into the age distribution's central tendency and spread. By visually comparing the violins, one can discern patterns in age distribution across various levels of frailty, making it a useful tool for exploratory data analysis in understanding potential relationships between age and frailty.
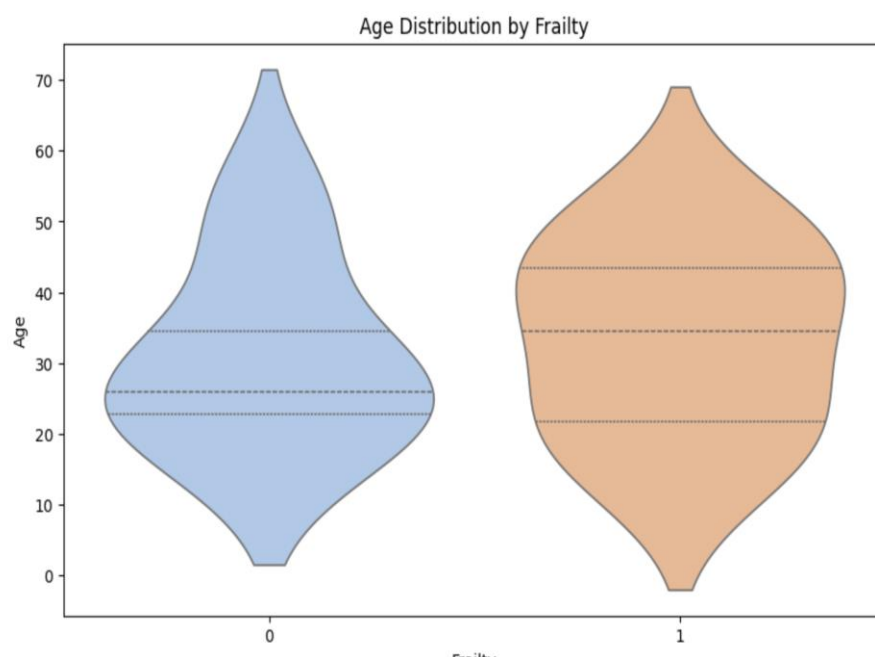
Plot 3:

The provided code utilizes matplotlib to create a dual-axis line graph, showcasing the trends of grip strength and height across different ages. By overlaying these two variables on the same plot with distinct y-axes, it allows for easy comparison of how grip strength and height change with age.

Grip Strength and Height by Age