

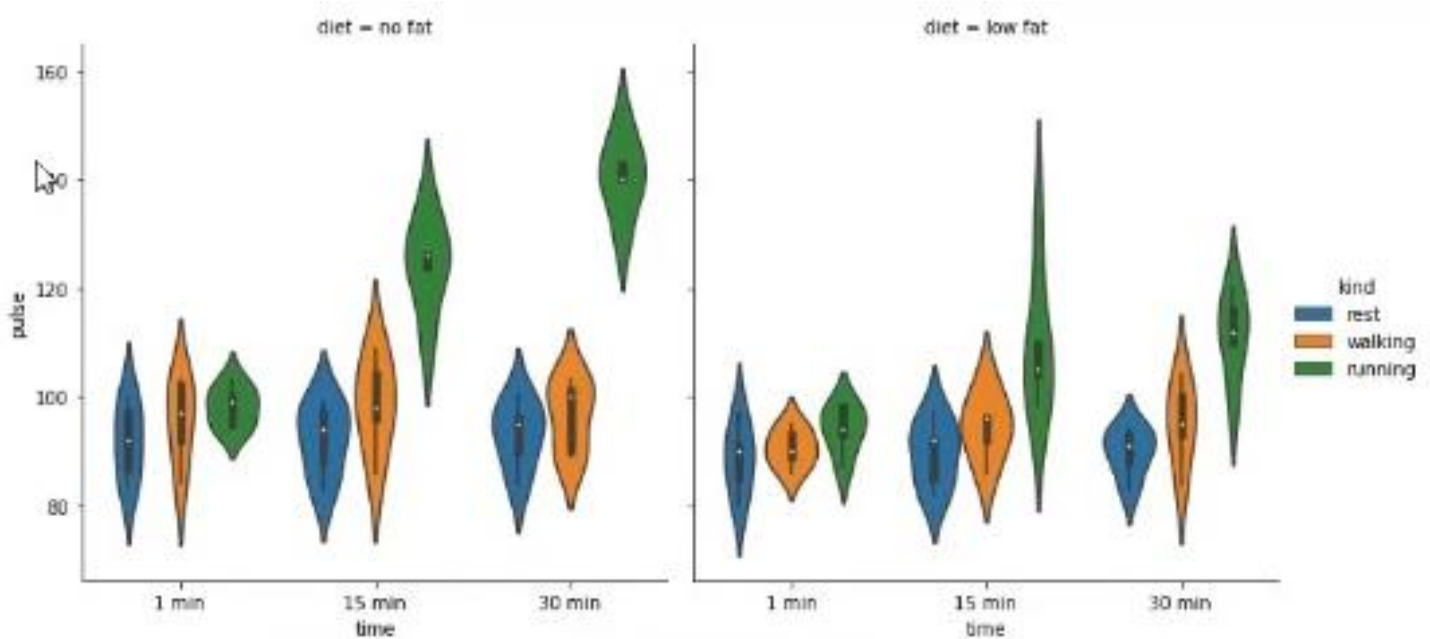
Swarm plot

A **swarmplot** is a type of scatter plot in Seaborn where data points are spread out along a categorical axis so they don't overlap, making it easier to see the distribution of individual values.

- **Purpose:** `seaborn.swarmplot()` creates a scatter plot for categorical data.
- **Comparison:** Similar to `stripplot()`, but points are adjusted so they don't overlap.
- **Clarity:** Gives a clear view of how values are distributed.
- **Limitation:** Not good for very large datasets (too crowded, slower).
- **Look:** Points spread like bees in a swarm → "swarmplot." □
- **Usage:** Can be used alone or combined with boxplots/violin plots.
- **Input:** Accepts wide-form, long-form, arrays, or lists of data.

Strip Plot	Swarm Plot
<ul style="list-style-type: none">• Places all points directly on the categorical axis.• Points can overlap, so dense areas may hide data.• Faster to draw, good for large datasets.	<ul style="list-style-type: none">• Adjusts the position of points so they don't overlap.• Every observation is visible.• Slower and less suitable for very large datasets.

In short: **strip plot = simple but overlapping, swarm plot = clear but slower.**



No Fat die

At 1 min: rest, walk run these three activities show distribution around 80 – 110. slightly higher spread for running pulse rate

At 15min: running pulse higher value and more variability.

At 30 min: Running pulse remaining highest and most variable. rest and walk pulse are low and moderate spread.

Low fat diet (right panel):

At 1 min: Similar overall ranges, but running has higher pulses

At 15 min: Running again shows highest pulse distribution; walking shows moderate pulses; rest stays lowest.

At 30 min: Running shows the largest increase pulse, rest and walking showing mid-range pulses.

Comparison

- Running consistently higher pulse values and increase variability than rest or walking, under both diet conditions.
- The low-fat diet panel tends to show higher pulses for running at 15–30 min, compared with no-fat.
- Rest and walking have lower and narrower pulse rate across all times, with less changes over time.