Efficient AI with Rust Lab
Rapid Time Series Datasets Library
RWTH Aachen University

Group 1

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Marius’s Part

Downsampling I

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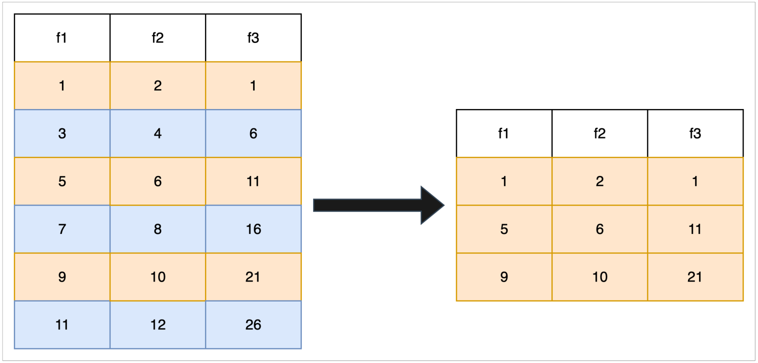
Example:

- Downsampling factor of 2: Every second data point is kept as shown in Figure 1

Downsampling II



f1	f2	f3
1	2	1
3	4	6
5	6	11
7	8	16
9	10	21
11	12	26

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Downsampling example with a factor of 2

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Bottleneck of passing the data by reference:

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- Creating view only possible on contiguous data.
- Downsampling does not yield a contiguous data structure.

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Splitting II (Random Split - Classification Data)

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1. Validate the proportions of train, validation, and test sets.

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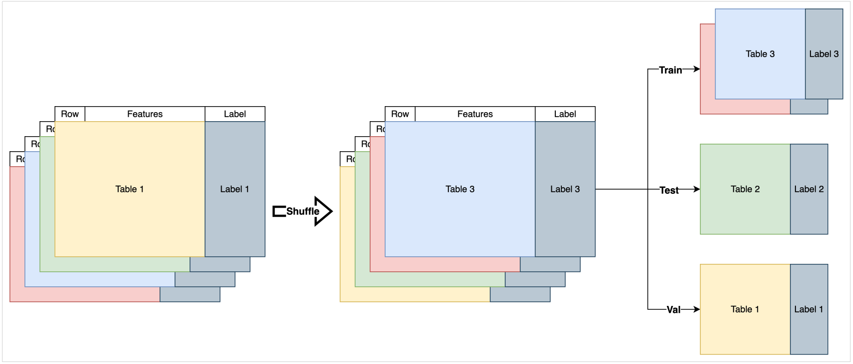
Splitting II (Random Split - Classification Data)

How it works:

1. Validate the proportions of train, validation, and test sets.
2. Shuffle the dataset randomly.
3. Compute the split offsets based on the proportions.
4. Split the instances into three sets.
5. Return the three sets as separate datasets.

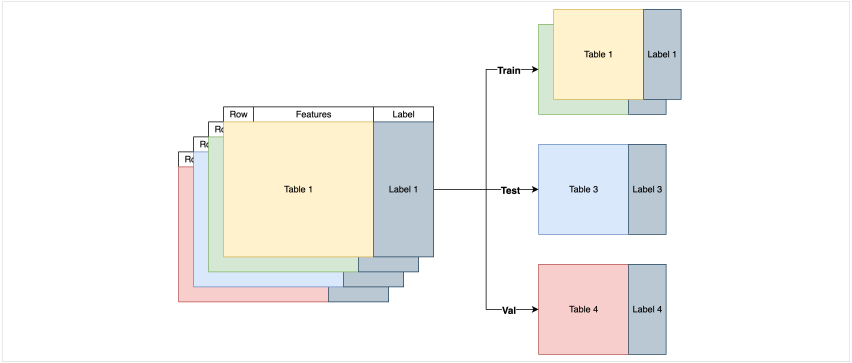
Splitting III (Random Split - Classification Data)



Random split example

Splitting IV (In-Order Split - Classification Data)

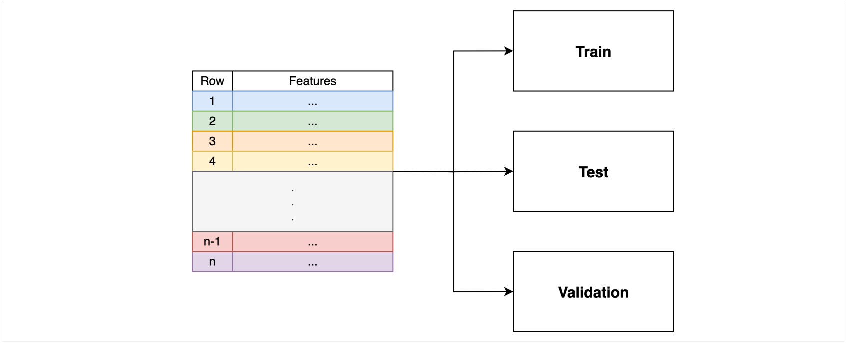
Works very similar to the random split, but it **doesn't shuffle** the dataset anymore.



In-Order split example

Splitting V (Temporal Split - Forecasting Data)

Similar to the in-order split, but this time we are dealing with forecasting data, which in most cases is only one instance and we split over **timestamps** and not isntances anymore.



Temporal split example

Kilian’s Part