

# Resampling Techniques - 101

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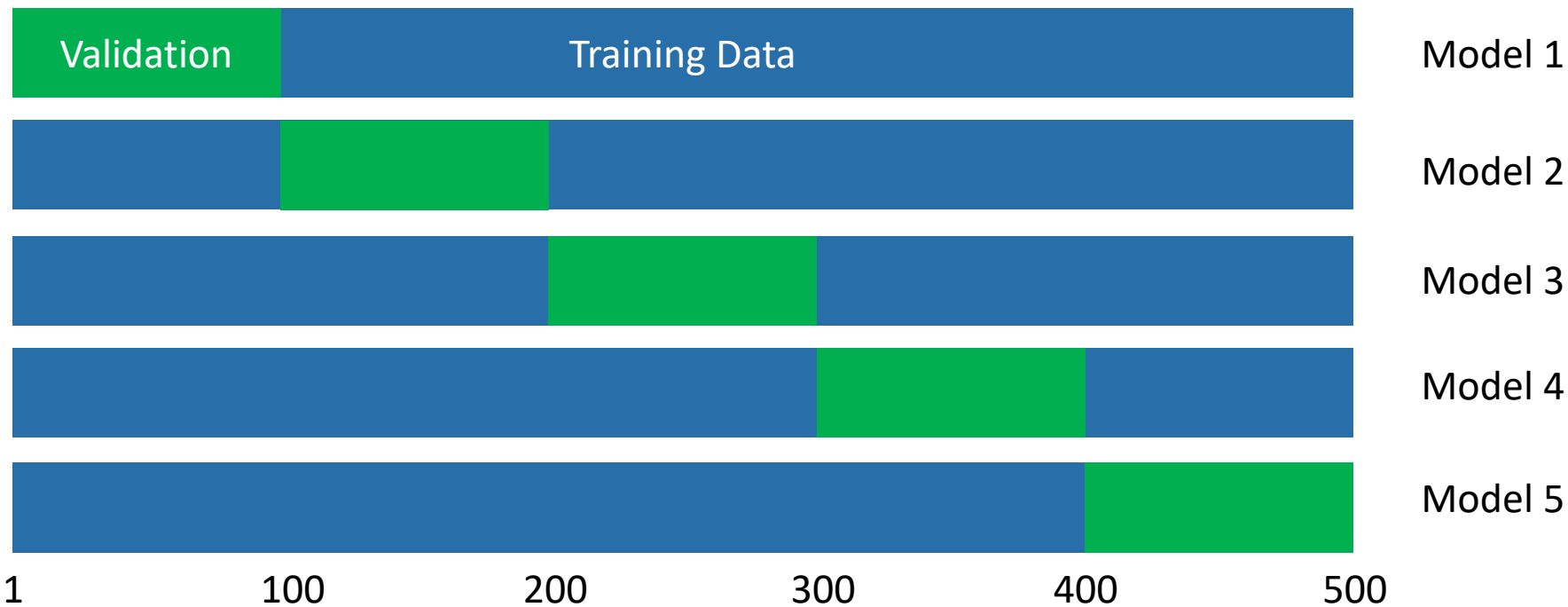
Problem of Train / Validation / Test Split



# Resampling Techniques - 101

Solution: k-fold Cross-Validation

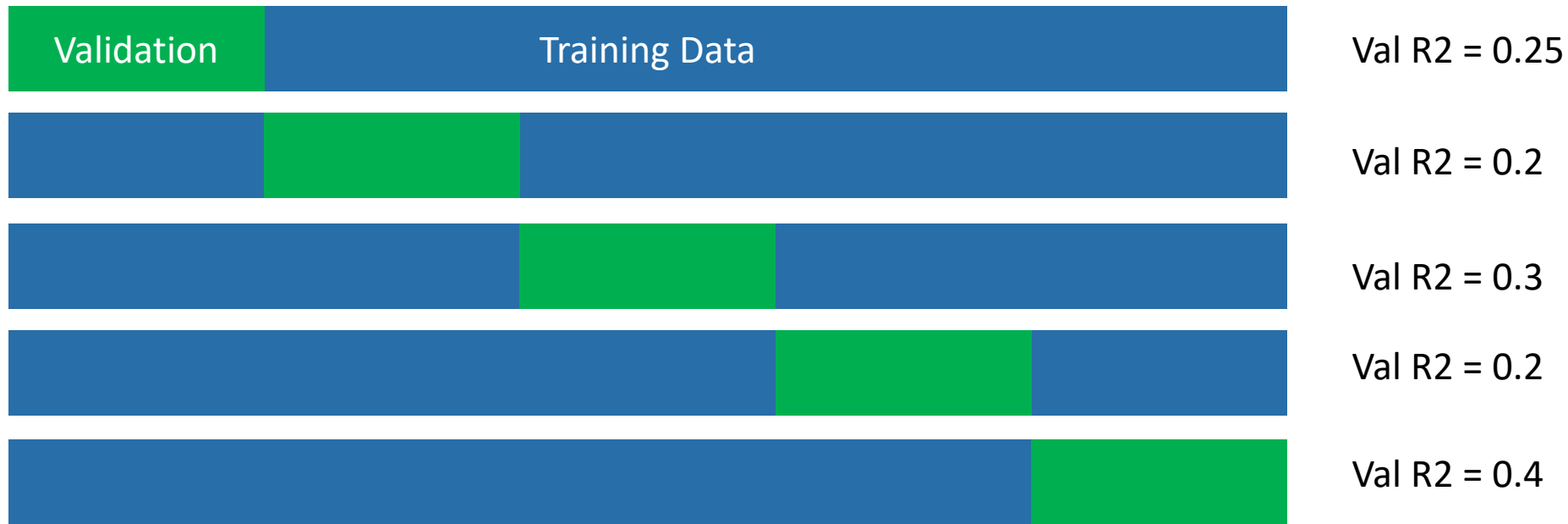
- Create k different training/validation sets
- Average validation set performance



# Resampling Techniques - 101

Example: 5-fold Cross Validation

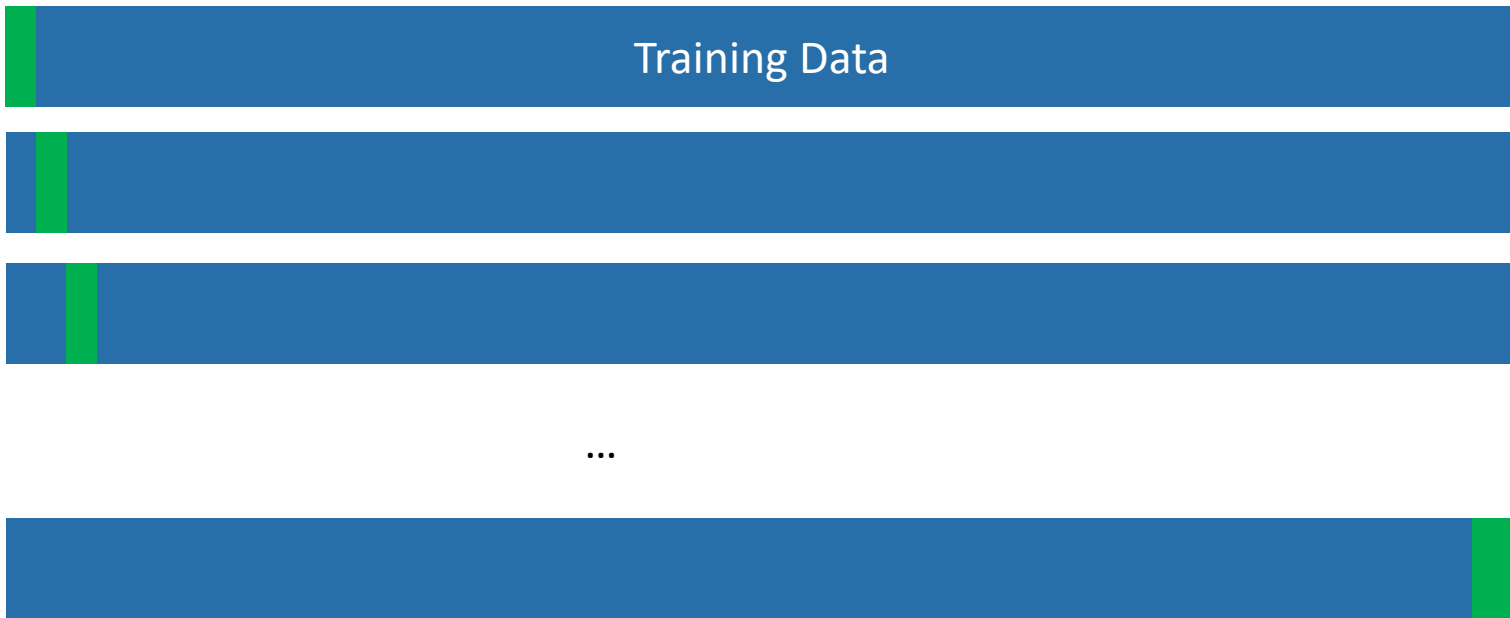
- Averaged Performance = 0.27



# Resampling Techniques - 101

## Leave One Out Cross Validation (LOOCV)

- Use all data for training, except one dataset
- One dataset used for validation



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Advantages / Disadvantages

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- better / more stable results
- good to compare different ML algorithms
- good for analysing hyperparameter tuning

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- Higher computational effort