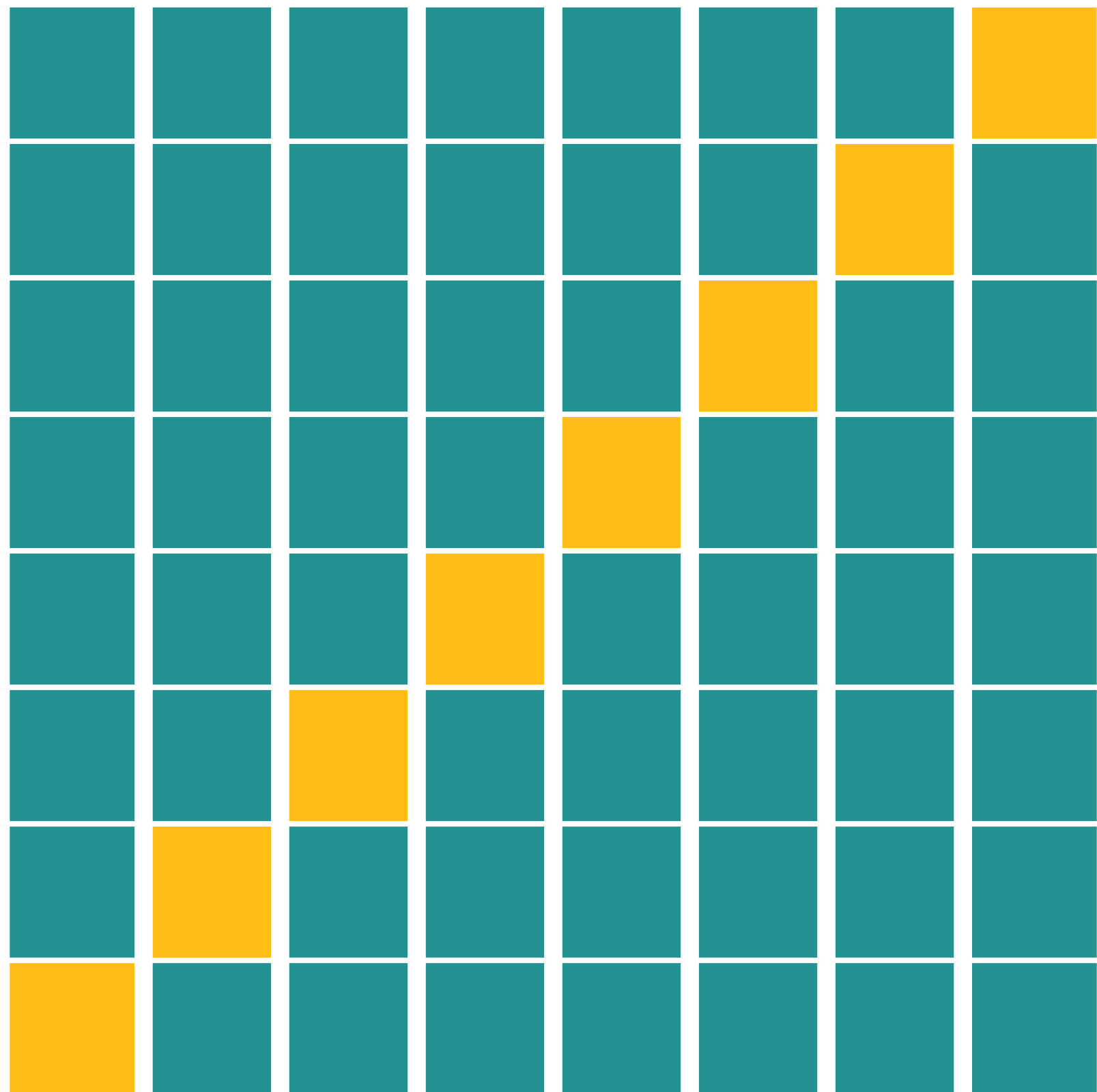




**K-Fold Cross Validation**

**data**

 **train**  
 **test**



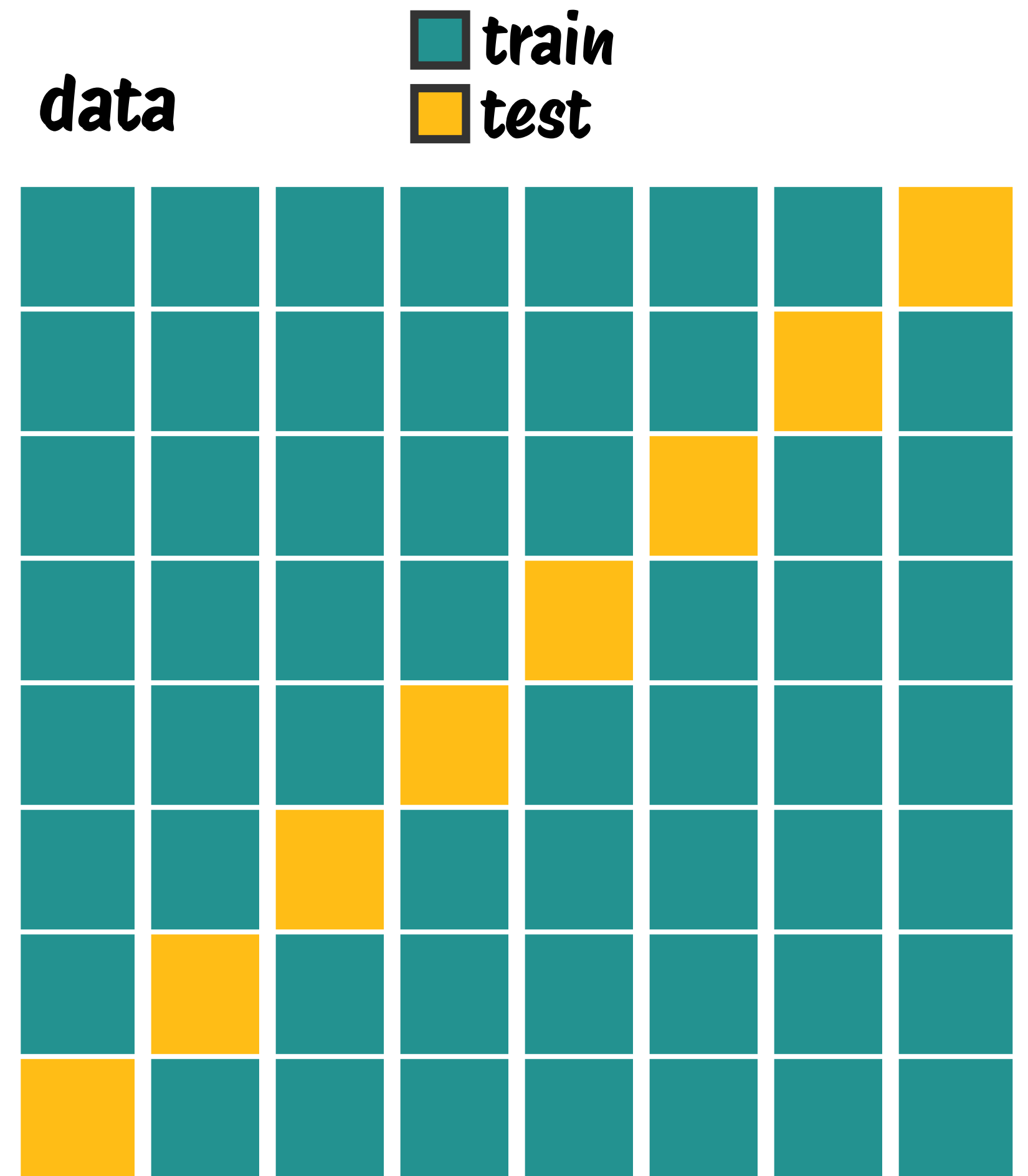
**cross validation simulates multiple train-test splits on the training data**

1. Randomly divide the data into  $K$  equal-sized parts
2. Leave out one part  $k$  out
3. Fit model to  $K-1$  parts combined ("train")
4. Obtain predictions for the left out part  $k$  ("test")
5. Repeat for each part  $k=1,2,\dots,K$
6. Combine results to get error estimates

# K-Fold Cross Validation

cross validation **simulates multiple train-test-splits** on the training data

1. Randomly divide the data into  $K$  equal-sized parts
2. Leave out one part  $k$  out
3. Fit model to  $K-1$  parts combined ("train")
4. Obtain predictions for the left out part  $k$  ("test")
5. Repeat for each part  $k=1,2,\dots,K$
6. Combine results to get error estimates



# Leave-One-Out Cross Validation (LOOCV)

cross validation **simulates multiple train-test-splits** on the training data