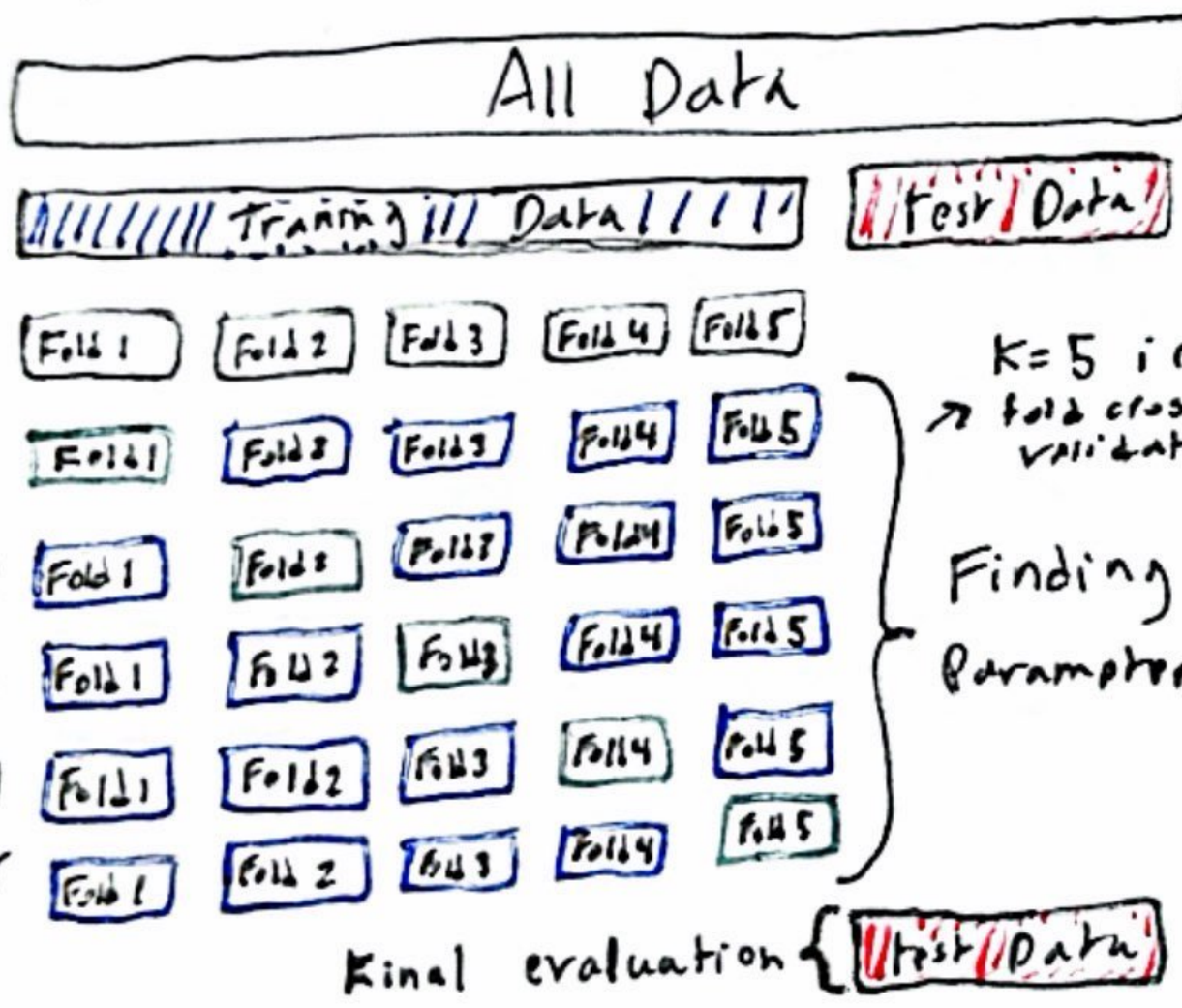
(Also see LOOCV) Cross Validation (k-Fold cross validation)

- extends the concept of validation by repeatedly traning and validating the model on different splits of the data • Ex in 5 Fold cross validation traning data is divided into 5 parts and the model is trained 5 times each time using a different part as the validation set rest for traning. another way of preventing over/under fitting

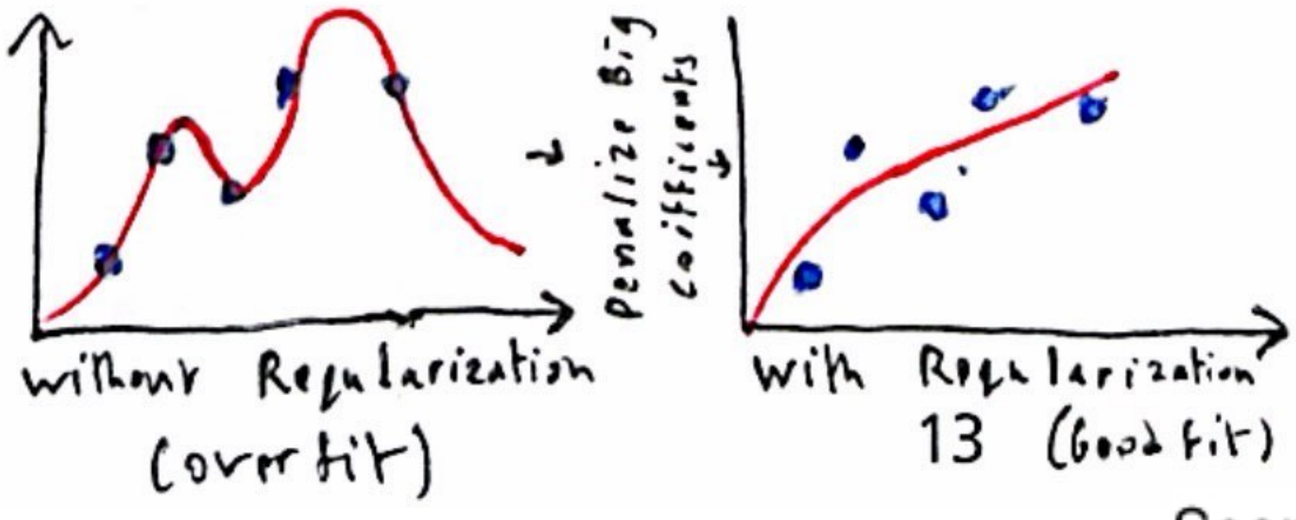
* this is like rotating bettwen parts of traning data and at each validation set stoping, validating model and then Foiguring out what hyperparameters to change/ other model choices- all in hope that it will improve the Model after each split.



Regularization

- refers to techniques used to prevent overfitting by adding constraints or penalties that discourage a model from becoming too complex or fitting to closely to traning data. it keeps model parameters small. its like squeezing the regression line. ammount of regularization is a hyperparameter

Ex: impact of reg.



*

too much regularization

=

Underfitting