Generative AI Interview Preparation

Overfitting

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Controle

1) → Regularization → Done

2) Dropout →

3) Early stopping

4) Data Augmentation

5) Cross validation

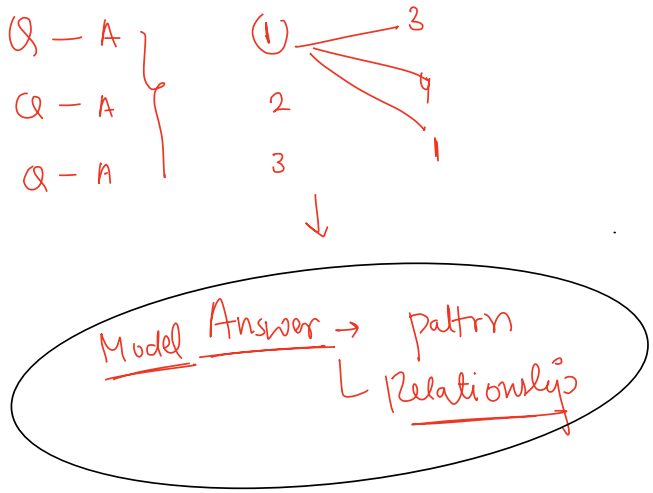
Dropout → Randomly → Neuron → Drop - Training

↓ ↳ Scaled

Training

↓

* overfiting → Memorize →



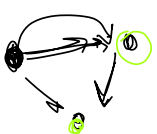
How → % → 0.2 — 0.5 = 20% – 50%

Dropout → Advantage → 1) Reduce Overfiting

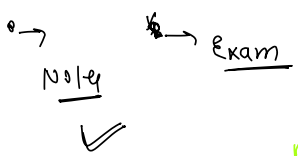
2) Generation → (Answer)

Generalisation

Test / Train → Same Answer



3) preventing co adaptation of Neuron



Best → Note →

Friend X

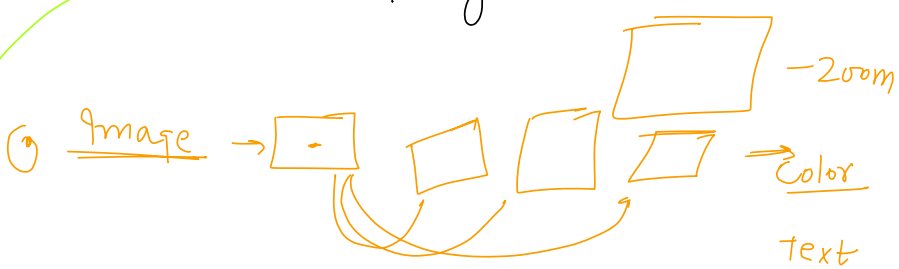
④ Dropout variants → 1) Variational Dropout
2) Spatial Dropout
3) Drop connect

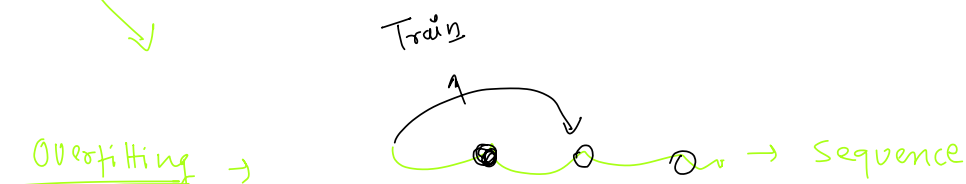
Data Augmentation → Add or Create More From existing

1) Text
2) Image
3) Video
4) Time series

⑤ How - ?

(2) How it Reduce Overfitting →





U

↓

→ Memorize

↓

Relation.

Smf

Add / etc → Dropout

→ Augmentation

③ → Early Stopping → Validation loss → Limit

Training loss

④

When - ?

↓

Model → Training ⇒ Overfitting → Train

How

Training → Validation loss

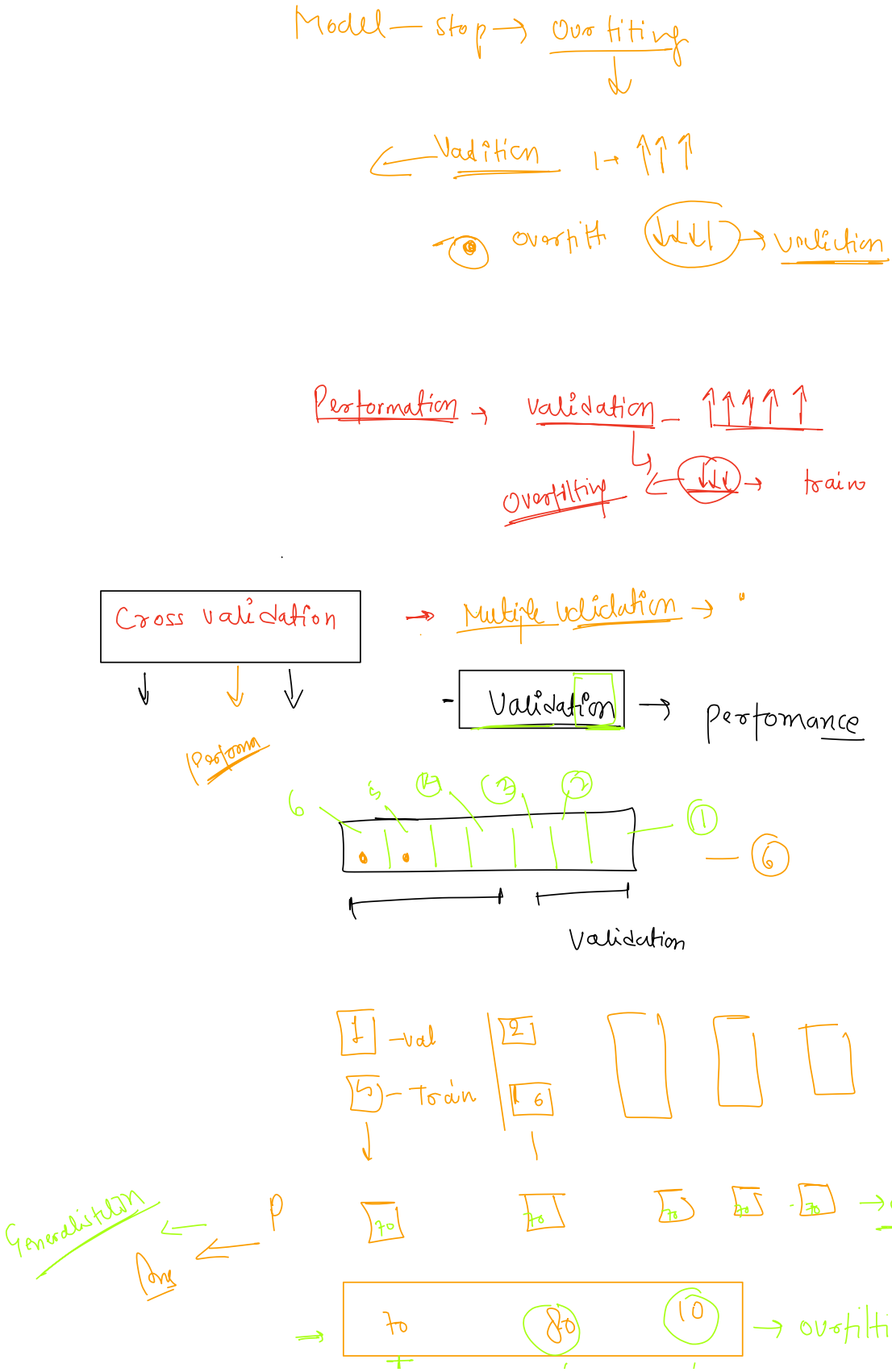
↑↑ Training

Validation → ↑↑↑

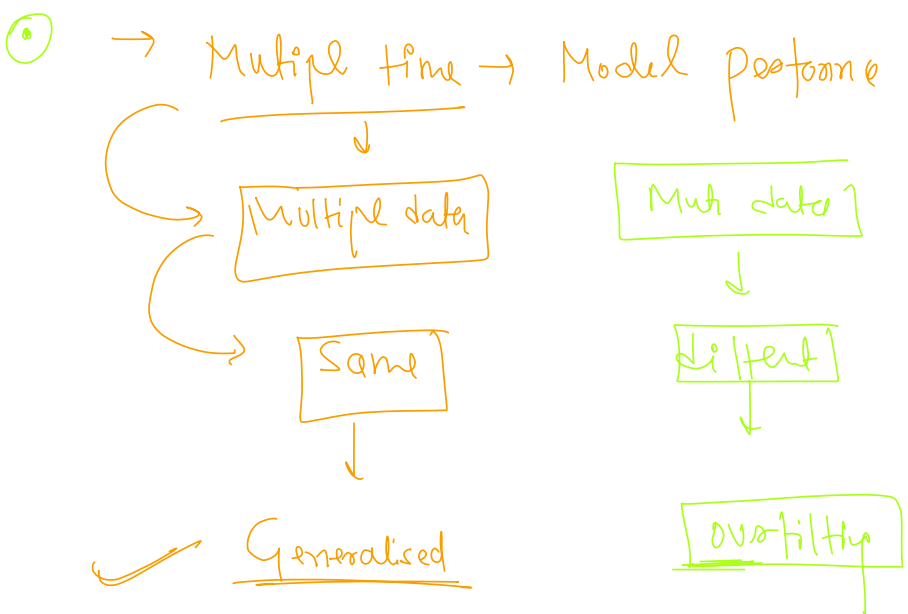
↓↓↓ → ↓↓↓ overfitting ↓↓↓

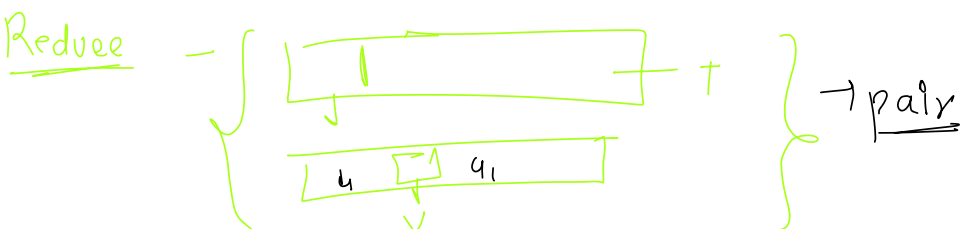
↓

Validation


Model — stop → Overfitting
Validition
overfit
validation
Performation → validation
overfitting
train
Cross validation
Multiple validation
Validation
performance
Validation
train
Generalisation
overfitting

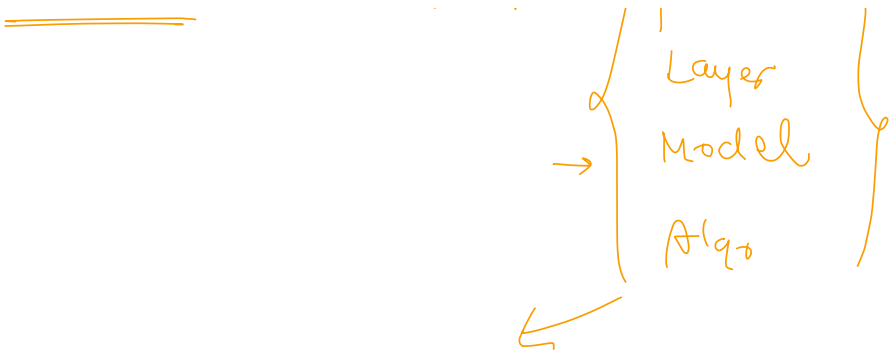
Overfitting

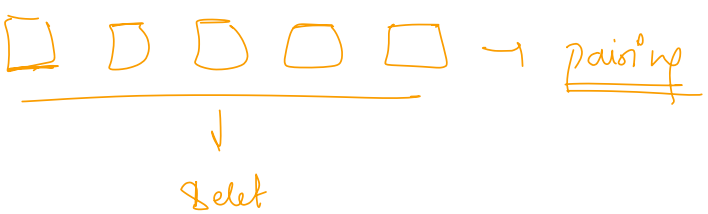


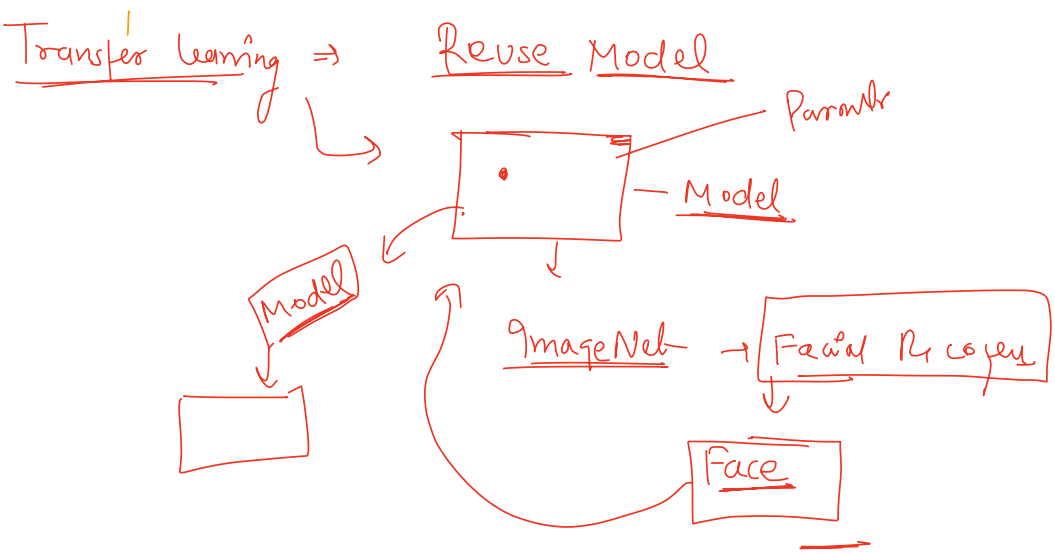


- $q - B \Rightarrow$
  $q_1 - B_1 \Rightarrow$
  $q - B_1 \rightarrow$
  } - Reation (Experiance)

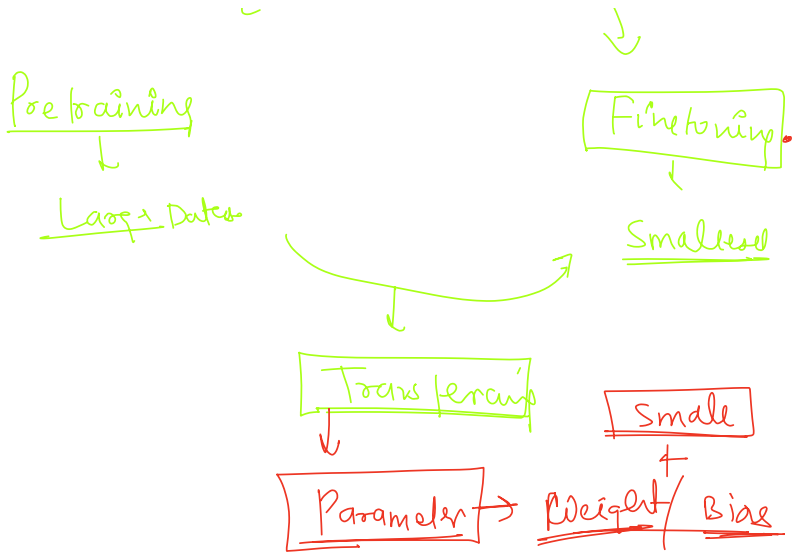
Golden Rule → No pre fixed-, parameter,







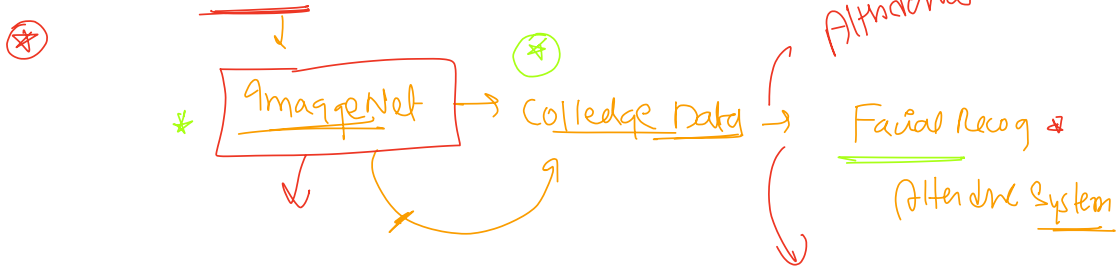
Transfer learning



(1) + Resorce

(2) Time

(3) – Dataset → Small → Build



(4) → Multi use of Data (Model)

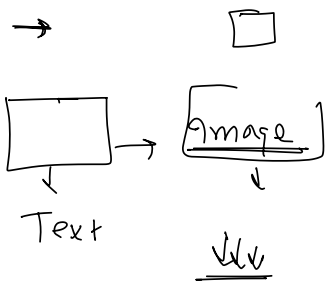
When →

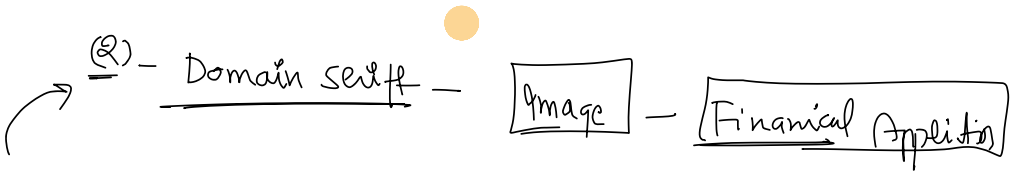
Limited Data

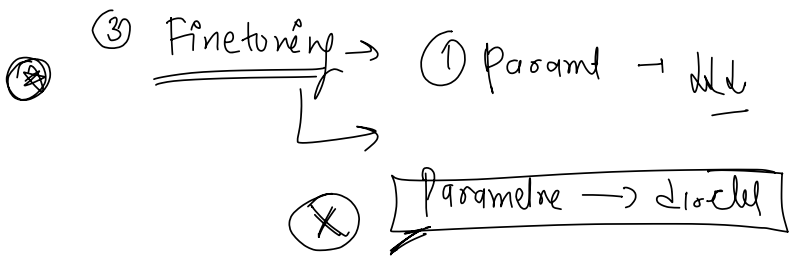
Complex Task

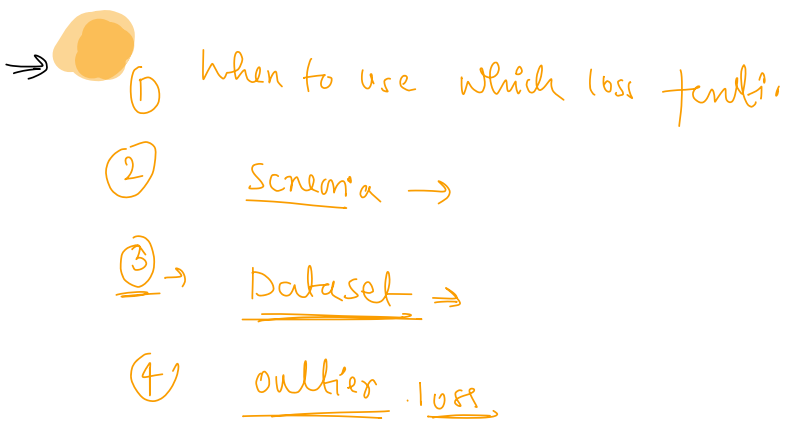
Time shift ↓

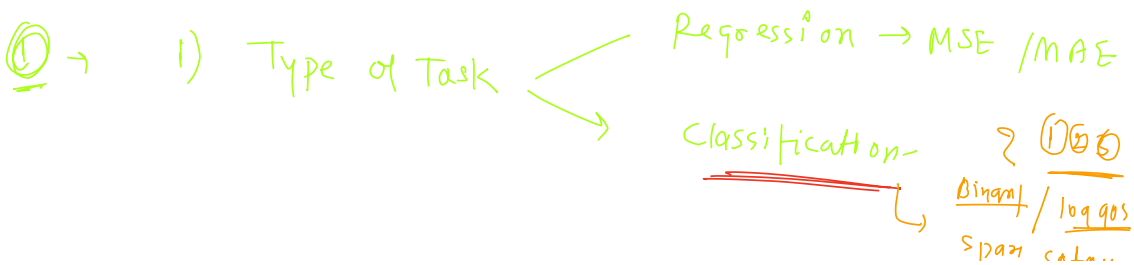
Disadvatage → 1) Negative Transfer →











(2) Data set → Multi class / Binary.

(3) Outliers → 1. MAE
2. MSE

(4) Goal → Category / prediction

(2) purpose → Error →

Actual 0000 1

↳ 0.6

1 − 0.6 = 0.8

Loss – Error → Weight / Bias — 50%

50%

Why → Dataset / Use case / → function = Error

1) Regression →
2) Classification
3) Generative
3) Time series