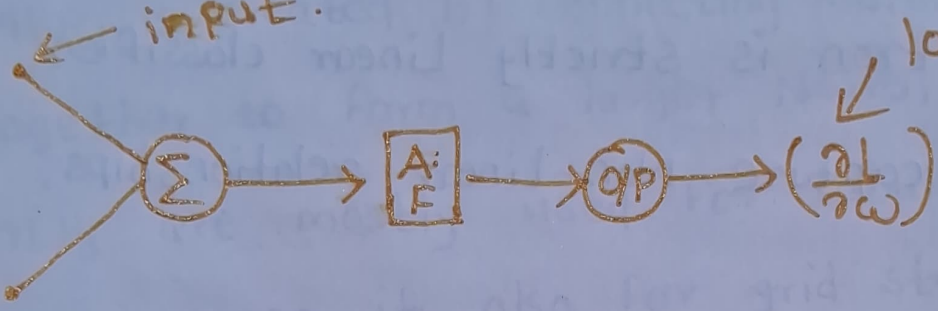
Perceptron Flexibility

(1) The Framework-



(2) Variants.

(i) if A.F = step
Loss = Hinge
→ Perceptron → Binary classification

(ii) A.F = Sigmoid
Loss = Binary cross Entropy
→ Logistic Regression → Probabilistic Binary class^{n}.

(iii) A.F = softmax
Loss = categorical cross Entropy
→ Multiclass classification

(iv) A.F = linear
loss = MSE
→ Linear Regression.

Perceptron Problem

* Problem :-

The perceptron is strictly Linear classifier.

It cannot capture Non-Linear relationships.