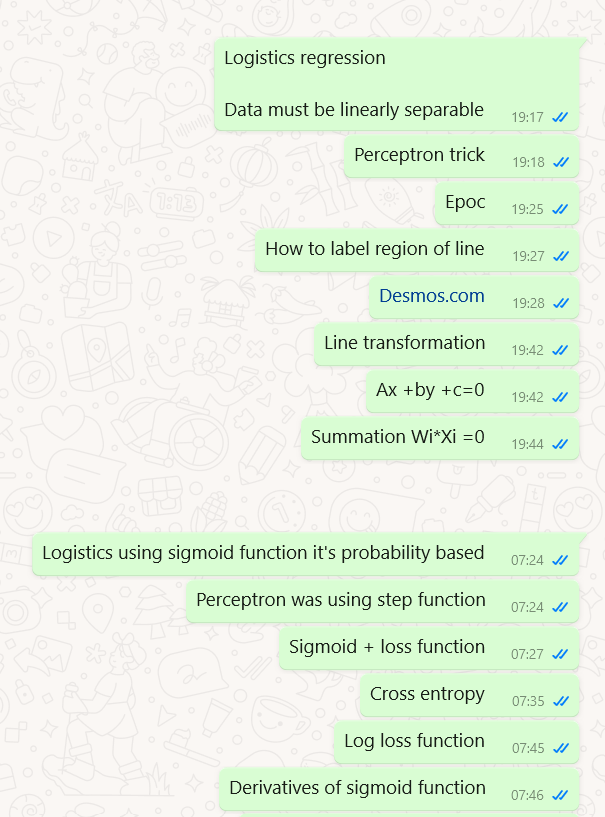
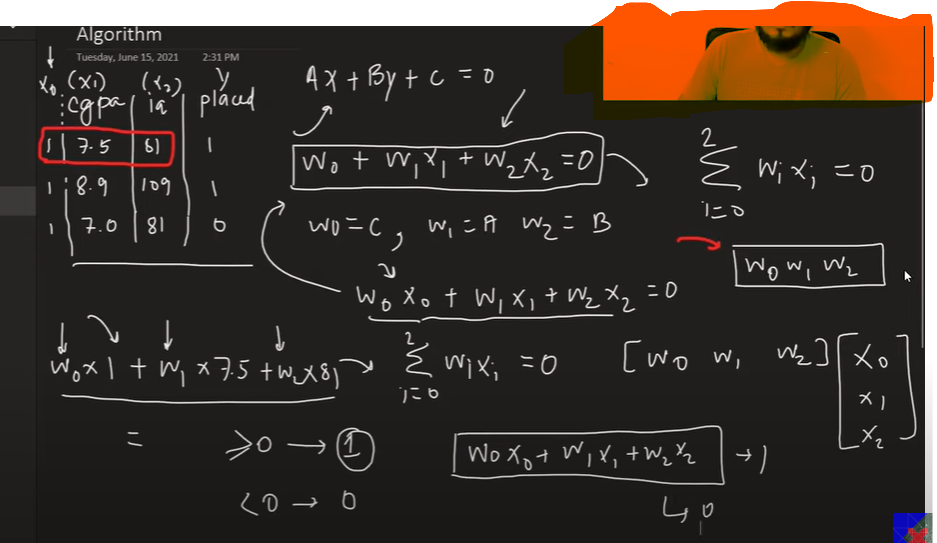
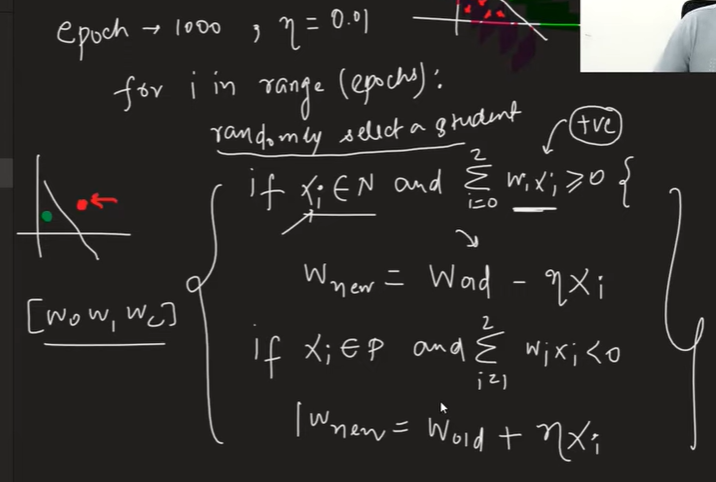
**Logistic Regression for Classification**

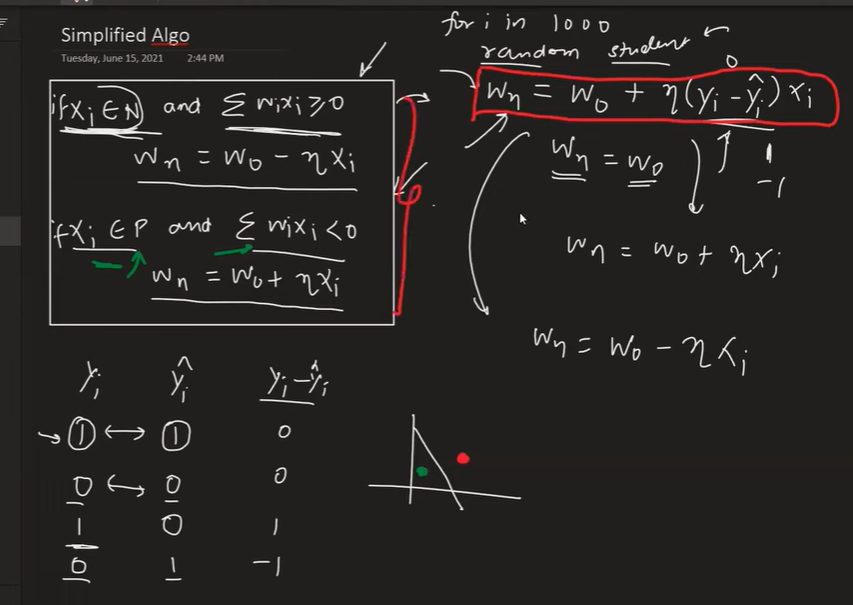
**Some important term that are used in logistic regression**

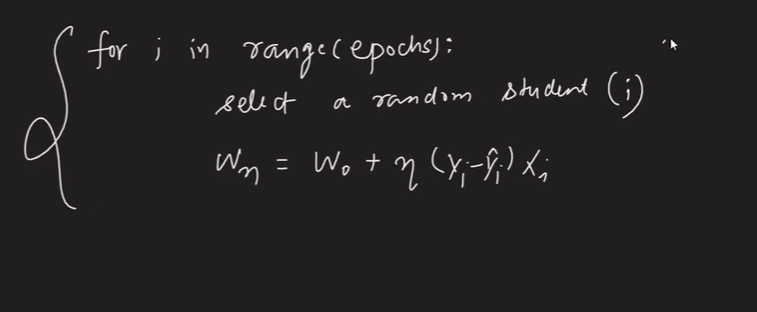


* Polynomial feature in logistics regression
* Logistics regression hyper parameters

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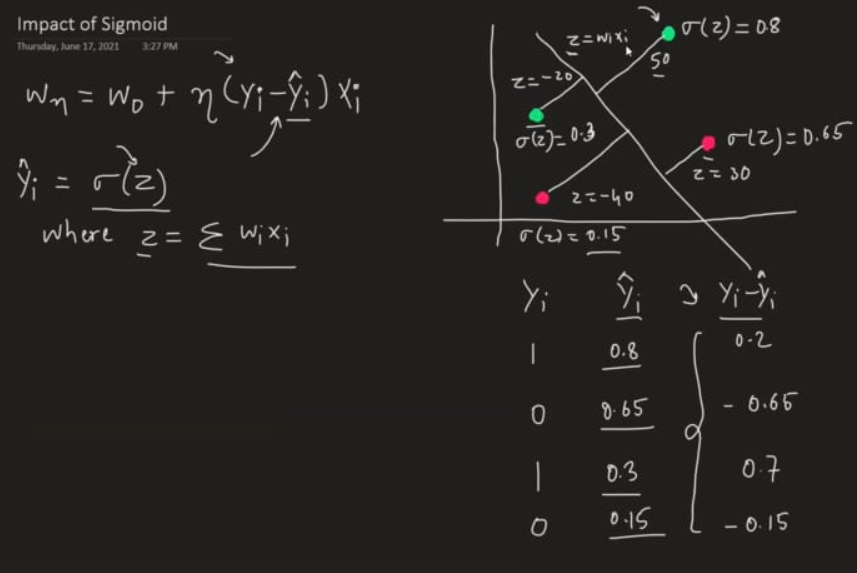
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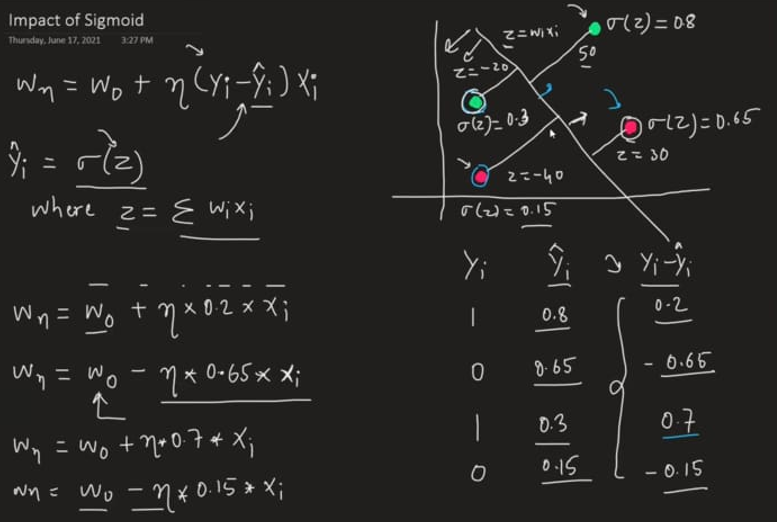
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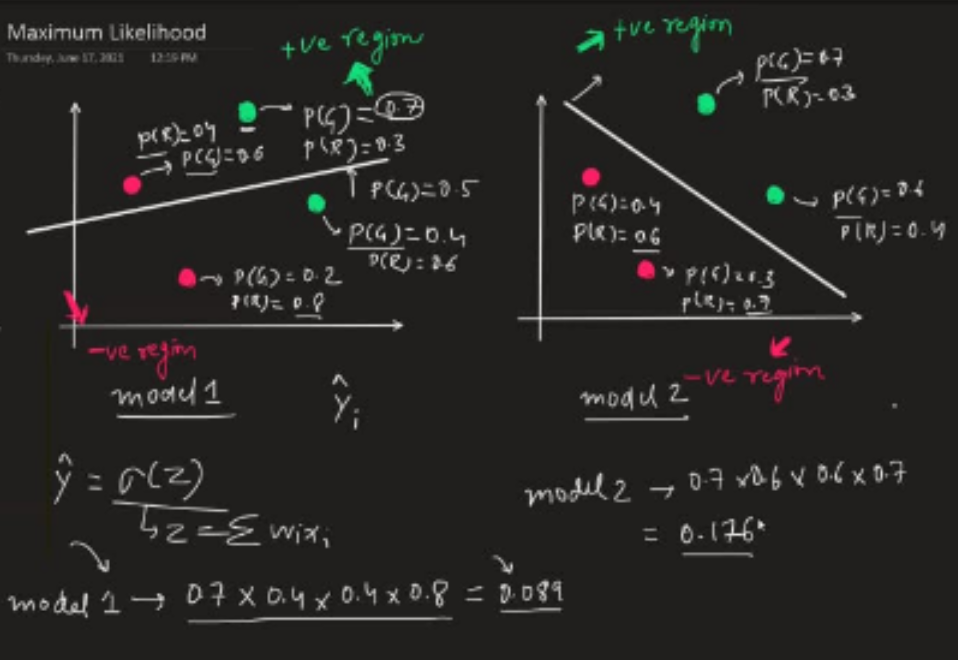
**This approach have some issues**

**Use sigmoid instead of step function**

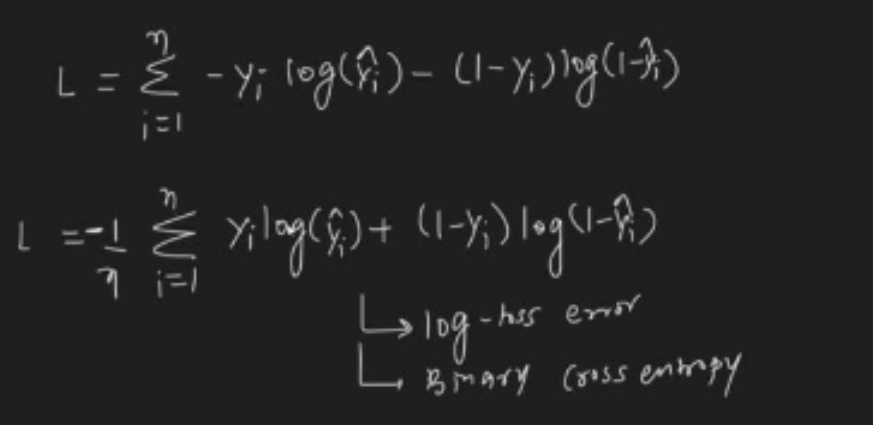
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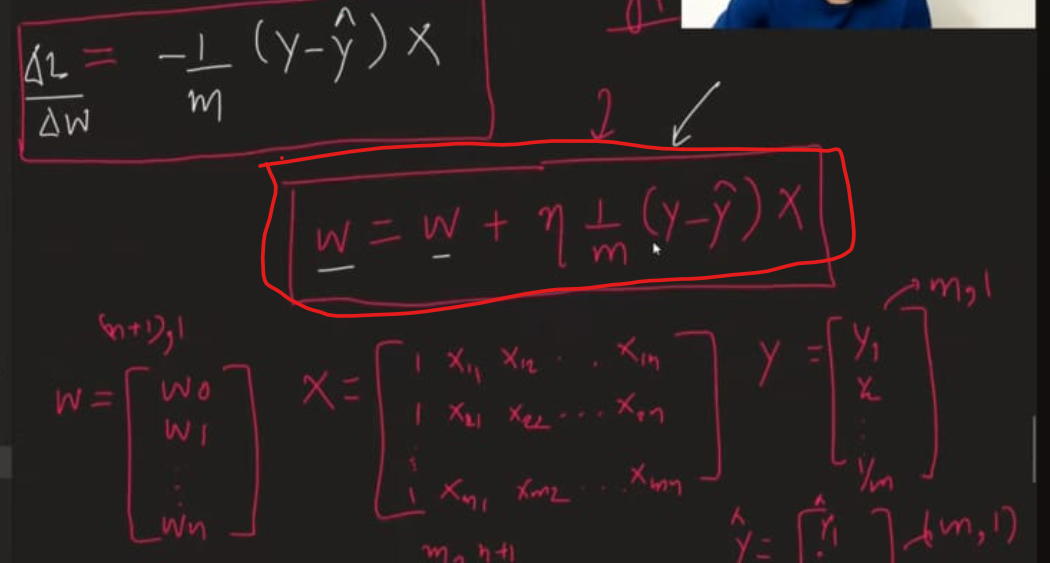
**Using sigmoid still we are not getting perfect predicted line which can divide both blue and green point from the middle so we need a loss function to calculate minima which can tell this line has the minimum loss**

****

**Log loss function**

****

**Derivative of log loss function (using gradient decent)**

****

**We can use this formula to write python code which will work like sklearn**

**Code -** [**https://github.com/campusx-official/100-days-of-machine-learning/tree/main/day58-logistic-regression**](https://github.com/campusx-official/100-days-of-machine-learning/tree/main/day58-logistic-regression)