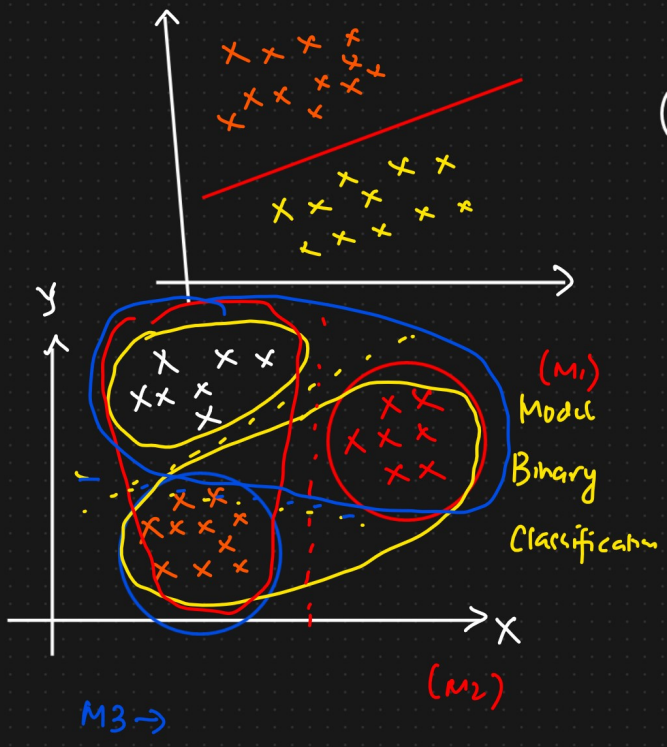
Logistic Regression For Multiclass Classification



① OVR → One Versus Rest

② Multinomial

f_1	f_2	f_3	⇓ O/P
–	–	–	1
–	–	–	0
–	–	–	2
–	–	–	2
–	–	–	0
–	–	–	1

One Versus Rest (OVR)

f_1	f_2	f_3	O/P	M1 O_1	M2 O_2	O_3
–	–	–	1	0	1	0
–	–	–	0	1	0	0
–	–	–	2	0	0	1
–	–	–	2	0	0	1
–	–	–	0	1	0	0
–	–	–	1	0	1	0

M1 Model → I/p = f_1 f_2 f_3 O/p = 01

⇓

Binary classification

M2 Model → I/p = f_1, f_2, f_3 O/p = 02

M3 Model → I/P = f_1, f_2, f_3 O/P = O3.

New Test Data → [M_1 M_2 M_3]

↓

[0.25, 0.25, 0.5]

⇓

02

New DATA →