

Lab 8

Adaboost

CGPA	Interactiveness	P. Knowledge	Communication Skill	Job Profile	
≥ 9	Yes	Good	Good	Yes	Yes
< 9	No	Good	Moderate	Yes	Yes
≥ 9	No	Average	Moderate	No	Yes
< 9	No	Average	Good	No	Yes
≥ 9	Yes	Good	Moderate	Yes	Yes
≥ 9	Yes	Good	Moderate	Yes	Yes

The best

Initial weight, $w_1 = \frac{1}{6}$

if $CGPA \geq 9 \Rightarrow \text{Job Profile} = \text{Yes}$

$CGPA < 9 \Rightarrow \text{Job Profile} = \text{No}$

CGPA	Actual	Predicted
≥ 9	Yes	Yes
< 9	Yes	No
≥ 9	No	Yes
< 9	No	No
≥ 9	Yes	Yes
≥ 9	Yes	Yes

$$E = \sum w_1 = \frac{1}{6} + \frac{1}{6} = \frac{2}{6} = 0.3337$$

$$d = \frac{1}{2} \ln \left(\frac{1-E}{E} \right) = \frac{1}{2} \ln \left(\frac{1-0.333}{0.333} \right) = 0.5806931 = 0.347$$

$$Z_{CGPA} = \frac{1}{6} \times 4 \times e^{-0.347} + \frac{1}{6} \times 2 \times e^{0.347}$$

$$Z_{CGPA} = 0.9438$$

$$w_1(d_1)_{1+1} = \frac{1}{6} \times e^{-0.347} = 0.1249$$

$$wt(d_{ij})_{11} = \frac{1/6 \times 0.847}{0.4429} = 0.2501$$

The best accuracy score obtained 83.3%

		Predict	
		0	1
True	0	7101	308
	1	1303	1052

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