

Project Component 1

① from sample_data.m

no of -1's = count_zeros = 8746

no of 1's = count_ones = 7638

$$\pi_{-1} = 0.5338$$

$$\pi_1 = 0.4662$$

$$\text{Threshold} : \frac{\pi_{-1}(-1) + \pi_1(1)}{2} \quad (= \text{avg. of probs})$$

$$\boxed{v = -0.0338}$$

I am getting less error from SNR 10. for SNR 10 I am getting almost given text.