

## CPT\_S 534 HW4

Yang Zhang

11529139

$$N \geq \frac{8}{\varepsilon^2} \ln((4(2N)^{d_{vc}} + 1) / \delta)$$

**Use a non-linear root-finding code to solve this implicit relationship for N with  $d_{vc} = 3$  and 6.**

**Hint  $4(2N)^{d_{vc}} \gg 1$ .**

Since  $4(2N)^{d_{vc}} \gg 1$ , the 1 can be dropped from the original inequality function. The using fzero function from Matlab with  $\varepsilon = 0.1$ ,  $\delta = 0.1$  solve for N.

N >= 2.93e+04 for  $d_{vc}=3$

N >= 5.90e+04 for  $d_{vc}=6$