Machine learning Homework- Deep Learning

Abinav Ravi Venkatakrishnan - 03694216 and Abhijeet Parida - 03679676

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1 Activation Function

Problem 1:

The matrix operation $w^T + b$ is essentially a linear operation. When we stack linear operations over other linear operations we essentially get a linear function. It is impossible to approximate complex functions with just linear operations, therefore non-linearity is introduced to overcome this problem.

Problem 2:

Problem 3:

2 Numerical Stability

Problem 4:

Problem 5:

Problem 6: