## Assignment 1 Notes

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1. Softmax

$$softmax(x)_{i} = \frac{e^{x_{i}}}{\sum_{j} e^{x_{j}}}$$
 
$$softmax(x+c)_{i} = \frac{e^{x_{i}+c}}{\sum_{j} e^{x_{j}+c}} = \frac{e^{c}e^{x_{i}}}{e^{c}\sum_{j} e^{x_{j}}} = \frac{e^{x_{i}}}{\sum_{j} e^{x_{j}}}$$