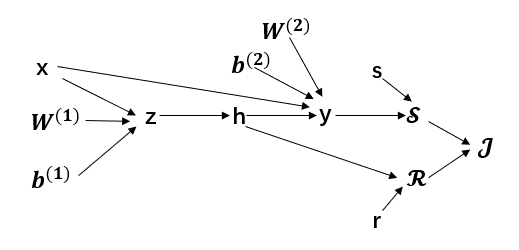
CSC421/CSC2516 Winter 2019 Homework 1

1. Hard-Coding a Network

1. Backprop

2.1



2.2

= 1 =

+ r

=

=

1. Sparsifying Activation Function.

We can check the value of derivatives using backprop. Here we use to denote the input of Relu activation unit .

: Yes.

: Yes.

Since and we have thus .

: No. Since both and can be positive, if we change a little, the value of and can be changed, then y will correspondingly change. Therefore, the derivative can be nonzero.