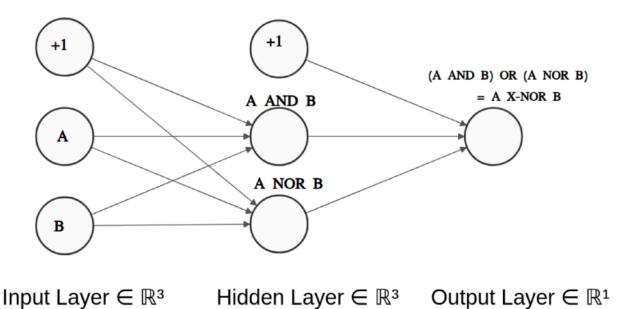
## **MLASSIGNMENT 8** IIT2018178, Manav Semester 5

## INTRODUCTION

We are told to Implement the X-NOR using Back Propagation Algorithm. Our X-NOR Model will look like this.



Hidden Layer  $\in \mathbb{R}^3$ 

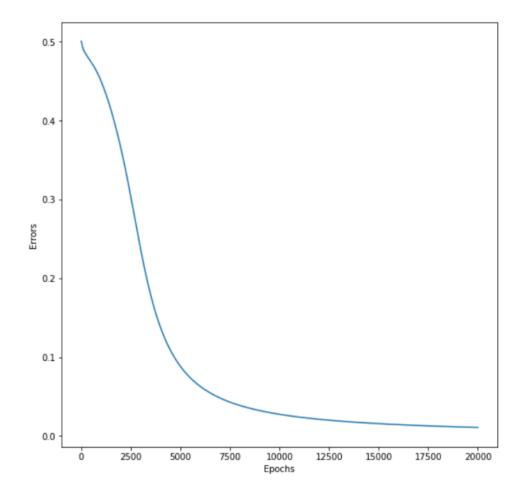
Output Layer  $\in \mathbb{R}^1$ 

## VERIFICATION

There are two ways to verify our model:

We can either make our model predict on test set and check the accuracy of our trained algorithm.

We can store the change in weights in every iteration and plot these changes against the number of iterations. We will easily be able to note the changes in error against each iteration from our plotted graph and as error decreased we get closer to the true value of the weight.



As we can see above, the error keeps decreasing, thus our prediction accuracy increases steadily after each iteration.