1. I have used ANN to train the model with one input layer and one hidden layer. All the variables except the customer id are useful for the data analysis of. Data was supposed to be scaled because not all the factors had numeric values. Therefore, first binary conversion was used wherever possible such that ‘yes’ was changed into binary 1 and ‘no’ was changed into binary 0. Also, there were instances where instead of ‘yes’ and ‘no’, other entries were available which could be converted into ‘yes’ or ‘no’. Therefore, initially such values were converted into ‘yes’ and ‘no’ and thereafter converted into binary 1 and 0 respectively. There were 11 rows where string data type entries were made with spaces only. Such entries were removed from the data during data cleaning.
2. Performance of the model is shown in the code itself.
3. The main factor which affects the customer churn is the tenure that they stay as a customer to the company. This shows that the company must be busy increasing the number of customers and not providing up to the mark services to its customers who have been there for a long time and using the company’s services.
4. Keeping the above factor in mind offers should be made for customers who have been using the company’s services for more than 20-30 months. Also, the monthly charges should be reduced.
5. These changes should be implemented for at least 1 month and proper data should be collected again with same factors and that data should be fed to the same ANN to produce results and the two results shall be compared to take any further decision.