Result and Discussion

1. The result show that as the number of Dimensions increases, the test elements increases significantly resulting in significant increase in time which affects the consumption of computer resources. Dimension must be in the minimum so that the less computer resources will be consumed. Given the situation we recommend the use of propagation in adjusting the weights. Through this propagation, testing the weight to reach its minimum value will result in minimum increase in the dimension solving the problem of significant increase consumption of the computer resources.

2.The results shows that as number of “Hidden Layer” increases, the less iteration perform needed for generalizing learning because more path for the data to travel resulting in faster fitting of initial data to its intent output. The decreasing of “Hidden Layer” will increase the iteration making it so complex that will make it harder for the computer to generalize the result giving imprecise data.

“Little Bobby loves cookies. His mother bakes chocolate chip cookies for him every Sunday. But, the world is not ideal and the cookies do not turn out equally tasty every Sunday. Some Sundays they taste better, some Sundays, they don’t taste as good. Being the curious little boy that he is, Bobby decides to find out when the cookies turn out to be tasty and when they don’t.

The first observation that he makes is that the number of chocolate chips in a cookie varies from cookie to cookie and that is pretty much the only directly observable thing that varies across cookies.

Now Bobby starts taking notes every Sunday. After seven Sundays, his notes look something like this:

* Sunday 1 – No. of Chocolate chips: 7; Tastiness: Awesome
* Sunday 2 – No. of Chocolate chips: 4; Tastiness: Good
* Sunday 3 – No. of Chocolate chips: 2; Tastiness: Bad
* Sunday 4 – No. of Chocolate chips: 5; Tastiness: Terrible
* Sunday 5 – No. of Chocolate chips: 3; Tastiness: Average
* Sunday 6 – No. of Chocolate chips: 6; Tastiness: Terrible

This looks pretty straightforward. The more the number of chocolate chips, the tastier the cookie except that the notes from Sunday 4 and Sunday 6 seem to contradict this hypothesis. What little Bobby doesn’t know is that his mother forgot to put sugar in the cookies on Sunday 4 and Sunday 6.

Since Bobby is an innocent little kid, he doesn’t know that the world is far from ideal and things like randomness and noise are an integral part of it. He also doesn’t know that there are factors that are not directly observable. But, they do affect the outcomes of our experiments. So, he goes on to conclude that the tastiness of cookies increases with the number of chocolate chips when the number of chips is less than 5 and more than 6. But, drops drastically when the number of chocolate chips is 5 or 6.

He has come up with an overly complex, and not to forget, an incorrect hypothesis to explain how the tastiness of cookies varies because he tried to explain and justify his notes from every single Sunday. This is called over-fitting. Trying to explain/justify as many observations as possible by coming up with an overly complex (and possibly incorrect) hypothesis.

If, instead, he had treated Sunday 4 and Sunday 6 as just noise, his hypothesis would have been simpler and relatively more correct.“