

Logically, if the both method is applied to those eight normal pattern observed data, the recognition result should be tend to the same pattern. Evaluating the both method, table 2 and 3 gives their performance. From 8 days, the neural networks control chart only recognizes 2 days (day 1 and day 4) for normal pattern. For other days, no correct classification was performed by this method. Regardless from too few simulating pattern, the neural networks control chart gives unsatisfactory result.

Similar to the neural networks control chart, the correlation based recognition also gives no better recognition result. Only day 3 and day 7 could be correctly classified with the highest correlation coefficient. However, this method gives simpler approach with faster recognition process rather than neural networks one.

## 5. Conclusion

Both methods in recognizing the control chart pattern, didn't give superior result. But, as the simple one, the correlation method needs no sophisticated algorithm to do the recognition process. This statistical method still can be an alternatives to the artificial intelligences.

For further research, simulated patterns provided for training process must be increased in case of its numbers of various behaviours. The  $r(t)$  also can be considered to accommodate various mean and variances, as well the constant  $b$ ,  $g$ ,  $T$  and  $s$ . More number of training data, means that the learning process catches the behaviour of control chart.

## 6. References

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