Cisco Testbed Network Telemetry Data

EDA – Insight on Portflap Failure

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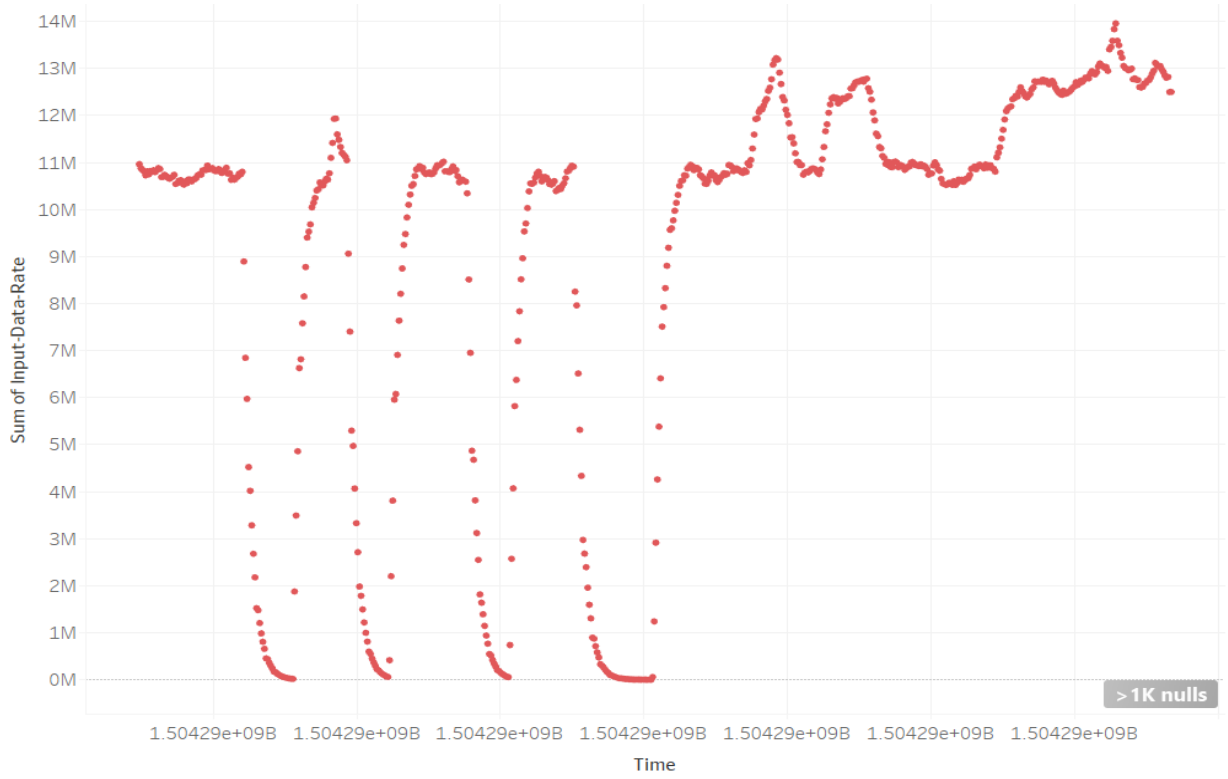
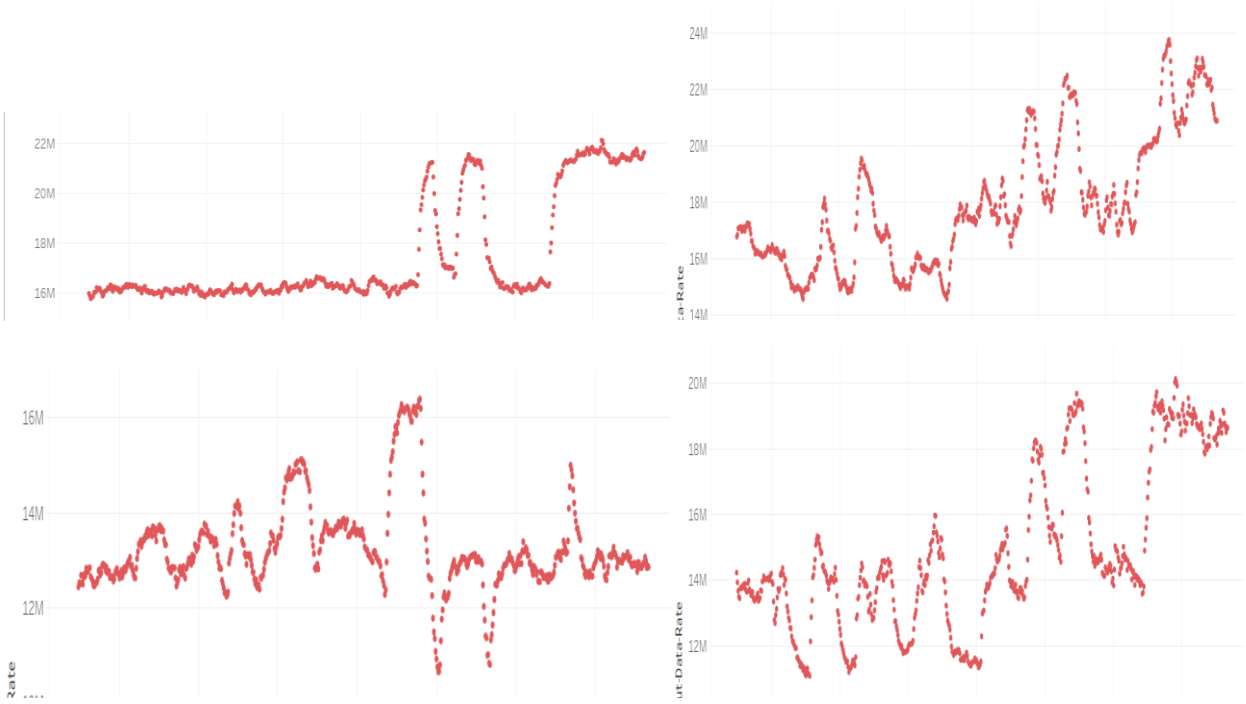
Continuing the discussion from last week's class, we now have a clear indication of how to distinguish type I, type III errors from type II (admin errors). We are still unable to distinguish between type I (pull transceiver) and type II (pull fiber) errors in the broader scheme of portflap faults.

To have the same previous semester model work for this semester as well, we will need to understand how the % changes (or variances) in the input data rates occur.



The above visualization is for the specific interface portflap failure. Here before the failure occurs the mean input data rate is 10749864.96 units; from which the data rate eventually drops to the least point of 17,682 units. The variance in this case a negative/drop of 99.835%.

Looking at a couple of other ports(for the same spine2 producer) for the input data rate visualizations: -



We can calculate the variance in the negative/drop is in anywhere in the range of 42.49%, 15.86%, 34.87%. Thus, we can (with a certain degree of confidence) conclude that any average percentage drop(variance) of about more than 50% over a time interval of more than 5 to 10 seconds will imply a port-flap failure with a high level of confidence.

This result will need to be cross-tallied with the results obtained by the other students and eventually tune the model developed in the previous semester.