Youtube Live and VoD Detection

Metrics chosen to differentiate Youtube live and VoD:

1. **Average packet inter-arrival time (forward) - src2dst_mean_piat_ms:**
   The average packet inter-arrival time refers to the amount of time between the arrival of consecutive packets in data transmission. It is a metric used to describe the frequency at which packets are transmitted over a network. In the context of 'forward', this term refers to the time taken for transmission of packets from source to the destination. In general, a lower average packet inter-arrival time indicates a higher rate of packet transmission, while a higher average inter-arrival time indicates a slower rate of packet transmission.

2. **Average packet inter-arrival time (backward) - dst2src_mean_piat_ms:**
   Average packet inter-arrival time - backward refers to the amount of time between arrival of consecutive packers in the backward direction, which is the time between packets being transmitted from the destination back to the source. A lower average packet inter-arrival time in the backward direction typically indicates a faster response time, while a higher average inter-arrival time indicates a slower response time.

3. **Average packet size (forward) - src2dst_mean_ps:**
   The average packet size refers to the typical size of the packets being transmitted over the network. The forward average packet size refers to the size of the packets being forwarded from the source port to the destination port.

4. **Average packet size (backward) - dst2src_mean_ps:**
   The backward average packet size refers to the size of the packets being transmitted from the destination port to the source port.

5. **Standard deviation of packet inter-arrival time (forward) - src2dst_stddev_piat_ms:**
   The standard deviation of packet inter-arrival time in the forward direction refers to the amount of variation or spread in the time between the

arrivals of consecutive packets in a data transmission. It measures how much the actual inter-arrival time deviates from the average inter-arrival time. A higher standard deviation means that there is more variation in the inter-arrival time, while a lower standard deviation means that the inter-arrival time is more consistent.

6. **Standard deviation of packet inter-arrival time (backward) - dst2src_stddev_piat_ms:**
   The standard deviation of packet inter-arrival time in the backward direction refers to the amount of variation or spread in the time between the arrivals of consecutive packets in the reverse direction or from the receiver back to the sender.

7. **Standard deviation of packet size (forward) - src2dst_stddev_ps:**
   The standard deviation of packet size in the forward direction refers to the amount of variation or spread in the size of the packets being transmitted over the network in the forward direction. A high standard deviation of packet size in the forward direction can indicate that there is a significant variation in the size of the packets being transmitted, which may impact the efficiency and performance of the network. A low standard deviation of packet size in the forward direction can indicate that the size of the packets being transmitted is relatively consistent, which can improve the efficiency and performance of the network.

8. **Standard deviation of packet size (backward) - dst2src_stddev_ps:**
   The standard deviation of packet size in the backward direction refers to the amount of variation or spread in the size of the packets being transmitted from the receiver back to the sender.

9. **Number of transmitted packets (forward) - src2dst_packets:**
   The number of transmitted packets in the forward direction refers to the total number of packets that have been sent from the source to the destination over the network. Tracking the number of transmitted packets in the forward direction can provide valuable insights into the overall traffic volume and network usage.

10. Number of transmitted packets (backward) - dst2src_packets:

The number of transmitted packets in the backward direction refers to the total number of packets that have been sent from the destination back to the source over the network.

11. Number of transmitted bytes (forward) - src2dst_bytes:

The number of transmitted bytes in the forward direction refers to the total number of bytes that have been sent from the source to the destination over the network.

12. Number of transmitted bytes (backward) - dst2src_bytes:

The number of transmitted bytes in the backward direction refers to the total number of bytes that have been sent from the destination back to the source over the network.

13. Source port - src_port

14. Destination port - dst_port

15. Protocol