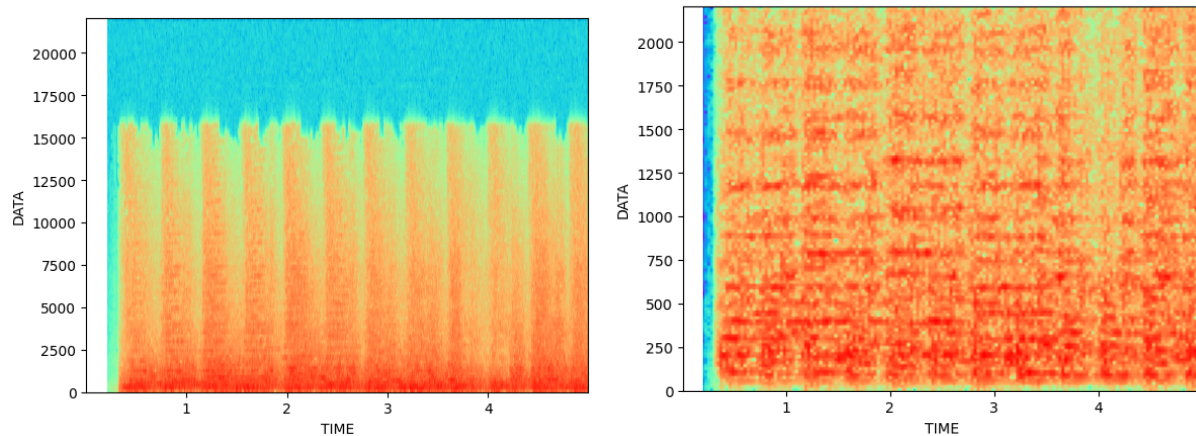# SAMPLING RATE DIFFERENCES

The Normal Sampling Rate vs The Downsampled Sampling Rate
We have already lost quite a few frequencies as notated by the y axis on either graph. The highest main frequency in the normal graph is around 15,000 Hz while in the downsampled graph, the highest main frequency is cut off around 2,000 Hz. This loses much of the frequencies that still fall under the normal human's hearing range, which is around 20 kHz.

Another thing to notice is the sudden emphasis on certain frequencies in the downsampled graph. This is due to aliasing because the sample rate is not high enough, making the wave be interpreted in ways that it actually doesn't sound.