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# Abstract

Sampling is a process in which one takes a continuous time signal (analog signal) and transforms it to a discrete time signal (analog to digital conversion (ADC)), by taking samples for a specified amount of time over a period (sampling period). After sampling is complete one can then apply quantization to encode the discrete values in a 0 and 1 format, which allows a computer to process a signal. After quantization, the noise can be removed from the signal by using filters, the signal to noise ratio can be calculated, and the original signal can be optimized and recovered.

# Introduction