Noise Cancellation using Adaptive Filtering Algorithms

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Abstract:

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Noises are the unwanted signals which corrupt our desired signals and to obtain a noise free signal, one must use some sort of filter to remove the noise from the desired signals.

However, there are certain cases where signal or noise characteristic are unknown, or signals are highly fluctuating, filters designed with fixed parameters do not yield expected result. In this case, the need to use adaptive filters arises. Adaptive filters have the capability to continuously adjust their parameters based on operating environments.

In this project, different Adaptive filters algorithms will be implemented on noisy musical signals and the result with different algorithms will be compared to each other.

Reference:

[1] D Niranjan and B Ashwini, “Noise cancellation in musical signals using adaptive filtering algorithms” in 2017 *International Conference on Innovative Mechanisms for Industry Applications (ICIMIA)*, Bengaluru, India, 2017