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International Journal of Computer Applications

Foundation of Computer Science (FCS), NY, USA

[Volume 179](#)

-  
[Number 17](#)

Year of Publication: 2018

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10.5120/ijca2018916290

{bibtex}2018916290.bib{/bibtex}

## **Abstract**

Speech enhancement is used in almost all the modern communication systems. It is obvious that when speech is being transmitted, its quality may degrade due to interference in the environment it is passing through. Some of the interferences that may affect the speech quality of transit include acoustic additive noise, acoustic reverberation or white Gaussian noise. This paper focuses on the techniques that appeared in the literature to enhance the signal of speech. Various methods used include wiener filter, statistical methods, subspace method, basic spectral subtraction method and spectral subtraction. In this paper authors will discuss various such methods along with their advantages and disadvantages. The discussion will also review the studies conducted by other researchers on other machine learning techniques, such as Neural network, Deep Neural Network ,Convolution Neural Networks and optimization techniques which used for the enhancement of speech.

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### Index Terms

Computer Science

Information Systems

### Keywords

Conventional speech enhancement methods, Adaptive filtering methods, Multi-modal methods