Audio Analytics

1. **Gaussian Noise:** This is a random noise with a Gaussian distribution. In audio, it's often used to simulate background noise or interference.
2. **Gaussian Noise SNR (Signal-to-Noise Ratio):** Refers to the ratio of the power of a signal to the power of the Gaussian noise interfering with it. It quantifies the level of noise present in relation to the signal.
3. **Frequency Mask:** A filter or process that masks or attenuates specific frequency ranges in an audio signal, often used in noise reduction or sound manipulation.
4. **Time Mask:** Similar to frequency mask, but applied in the time domain. It masks or attenuates specific time segments in an audio signal.
5. **Time Stretch:** A technique that alters the duration of an audio signal without affecting its pitch, essentially stretching or compressing time while maintaining the original pitch.
6. **Pitch Shift:** Modifies the pitch of an audio signal without altering its duration, raising or lowering the perceived frequency or musical pitch.
7. **Shift:** Generally refers to moving an audio signal in time or frequency domains.
8. **Normalize:** Adjusts the amplitude of an audio signal to a target level without distorting its dynamic range.

9. **Polarity Inversion:** Reverses the polarity of an audio waveform, inverting its phase.
10. **Gain:** Amplification or attenuation of the amplitude of an audio signal.
11. **Background Noise:** Unwanted sound present in an audio recording, often from the environment or recording equipment.
12. **Add Short Noises:** Introducing brief instances of specific noise types into an audio signal, usually for simulation or testing purposes.
13. **Clipping Distortion:** Occurs when an audio signal exceeds the maximum amplitude that a system can handle, resulting in a distorted waveform.
14. **Clip:** Truncating or limiting the peaks of an audio signal at a specific level to prevent distortion.
15. **Highpass, Lowpass, Bandpass, Bandstop:** Different types of filters used to pass or stop certain frequency bands in an audio signal.
16. **Reverse:** Reverses the playback of an audio signal.
17. **Peaking, Lowshelf, Highshelf:** Different types of equalization filters used to modify specific frequency bands.
18. **Gain Transition:** Smooth change or transition in gain/amplitude over time.
19. **Room Simulator:** A system that mimics the acoustic characteristics of different rooms or environments.
20. **Padding:** Adding silence or zeros to the beginning or end of an audio signal.
21. **Seven Band EQ:** An equalizer with seven frequency bands for adjusting specific ranges of frequencies in an audio signal.
22. **Air Absorption:** The phenomenon where sound waves lose energy as they travel through air, usually at higher frequencies.
23. **Limiter:** A device or effect that prevents an audio signal from exceeding a specified amplitude level, used to control peaks and prevent clipping