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## Spectrogram Example

Source Code :

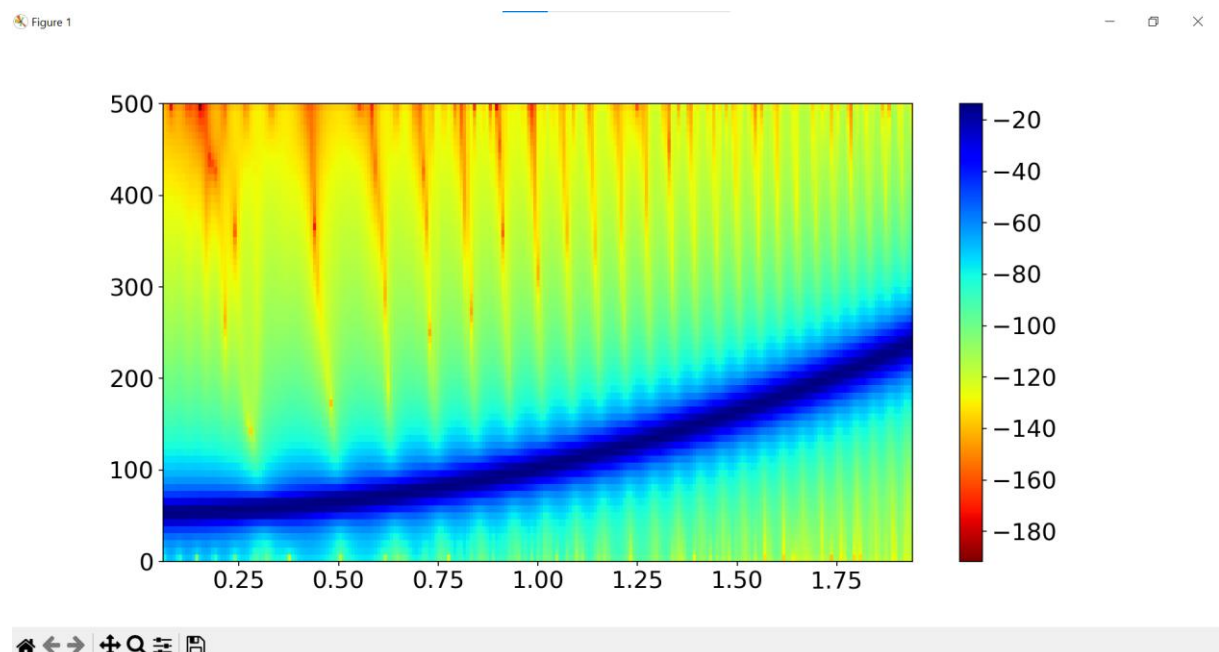
```
import numpy as np
import sounddevice as sd
import matplotlib.pyplot as plt
plt.rcParams['figure.figsize'] = [12,8]
plt.rcParams.update({'font.size' : 18})

dt = 0.001
t = np.arange(0,2,dt)
f0 = 50
f1 = 250
t1 = 2
x = np.cos(2*np.pi*t*(f0 + (f1 - f0)*np.power(t,2)/(3*t1**2)))

fs = 1/dt
sd.play(2*x, fs)

plt.specgram(x, NFFT=128, Fs=1/dt, noverlap=120, cmap='jet_r')
plt.colorbar()
plt.show()
```

Spectrogram :



**Link Rekaman Suara :** <https://github.com/user-attachments/assets/fd6391a3-b843-402e-a5b9-ca8089028be8>

**Link Full Source :** <https://github.com/Zaidanfzn/Spectrogram>