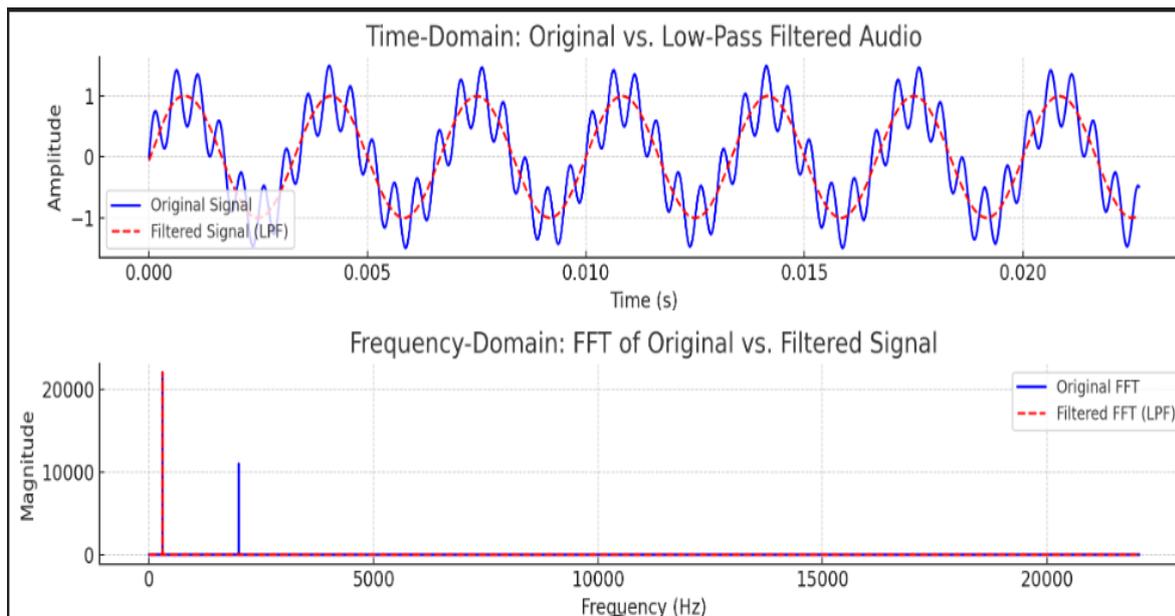


**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
INNOVATIONS IN TEACHING LEARNING PRACTICES**

Year/Sem : III & V
Dept of Course banded : ECE
Course Code : EC8553
Course Name : DISCRETE-TIME SIGNAL PROCESSING

S. No.	Name of the Activity	Details	Mapped COs, POs & PSOs	
1	Activity-Based Learning	Real-Time Signal Processing with Audio Signals	CO	CO2
			PO	PO1, PO3, PO4, PO5, PO9, PO10, PO11, P12
			PSO	PSO1
2	Case study	Spectrum Analyzer	CO	CO5
			PO	PO1, PO9, PO10
			PSO	PSO1
3	CODING COMPETITION - DSP HACKATHON	Organize a coding competition where students implement DSP algorithms to solve specific problems	CO	CO1, CO2, CO3, CO4, CO5
			PO	PO1, PO3, PO4, PO5, PO9, PO10, PO11, P12
			PSO	PSO1, PSO2, PSO3

PROOF 1



PROOF 2



The MXA signal analyzer offers a robust performance in virtual identification of any wireless device signals with evolving testing demands including contemporary parametric or RF functional tests. – Source: Keysight

This article will look at the different types of spectrum analyzers, how they work, and their uses. This information will help you understand how to reliably detect and characterize RF signals that change over time.

PROOF 3

```

13 % Load recorded speech data
14 numSpeakers = 2;
15 [speech,fs,label] = makeConversation(1,4,1);
16 dataTitle = strcat('Rec ', num2str(numSpeakers));
17
18
19 % Detect initial silence to use as noise
20 % Uses a Gaussian bandpass filter to do a preliminary noise reduction and
21 % detect sections of speech.
22
23 GFILT = bandpass(speech,[300,3000],fs,'Steepness',0.5);
24 speechIdx = detectSpeech(GFILT,fs);
25 g1 = speechIdx(1,1);
26 g2 = 0;
27
28 try
29     g2 = speechIdx(2,1) - speechIdx(1,2);
30 end
31
32 if g2 > g1
33     nStart = speechIdx(1,2);
34     nFinsh = speechIdx(2,1);
35 else
    
```

Transcript	Confidence	TimeStamps
for experimental hospitals. Piaxced poitions and mustaid plasters still are used by some persons,*	NaN	2.15 43.89