Digital Signal and Image Processing Lab

The Digital signal and Image Processing Laboratory supports teaching, research and consultancy work on MATLAB and CC-Studio. Through simulation, students gain knowledge on analysis of different image processing techniques on an image and also designing the filters for analysis of the response of the filter. The laboratory can also be used for project work related to signal processing, Image processing and Communication system. The experiments of Digital signal and Image Processing laboratory are

- Acquire the knowledge on MATLAB tool to analyze and design the signal and Understand modern tool usage for apply image processing techniques.
- Can be able to analyze and Understand modern tool usage for apply image processing techniques like image transformation, enhancement, and compression techniques.
- Able to analyze and understand modern tool usage for apply on filtering, color image processing concepts.
- Able to analyze and design the frequency response of low and high pass filters.
- Able to analyze and design the frequency response of FIR filters.
- Able to compute FFT of a signal.
- To educate engineer researchers and to conduct research in all aspects of signal processing, image processing and communication system.

The laboratory has

1. The frequency response of analog LP/HP filters.
2. Sampling and effect of aliasing.
3. Linear and circular convolution.
4. Compute PSD of sequences.
5. Compute FFT algorithm
6. Design FIR filter using the windowing technique.
7. Image smoothening and sharpening in spatial and frequency domain.
8. Color image processing.

The features and facilities available in this laboratory help the students to do their projects and enhance their knowledge on the latest trends and technologies. Students from other branch of engineering also make use of this laboratory and develop their skills.

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