

## Classification of Cochannel Signals Using Cyclostationary Signal Processing and Deep Learning

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**Abstract :** The task of classifying radio frequency (RF) signals has seen recent success in employing deep neural network models. In this work, we present a combined signal processing and machine learning approach to signal classification for cochannel anomalous signals. The power spectral density and cyclostationary signal processing features of a captured signal are computed and fed into a neural net to produce a classification decision. Our combined signal preprocessing and machine learning approach allows for simpler neural networks with fast training times and small computational resource requirements for inference with longer preprocessing time.

**Keywords :** signal processing, machine learning, cyclostationary signal processing, signal classification

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