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## Investigating Unassociated Fermi-LAT sources for the search of Gamma ray Pulsars and Millisecond Pulsars.

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The fourth catalog of Fermi Large Area Telescope (LAT) consists of 2157 unassociated gamma ray sources. These are gamma-ray sources whose counterparts in other wavelengths (such as radio, X-ray, or optical) have not been identified. Their nature remains a mystery making them fascinating objects to study. The Direct Search Analysis (DSA), a novel method also utilised to analyse continuous gravitational waves, plays a crucial role in studying the nature of these unassociated sources. In the presentation, I will discuss the application of DSA to investigate the characteristics of the unassociated gamma ray sources. My analysis focuses on a selected group of unassociated sources, employing DSA to study their patterns and signatures to determine if these unassociated sources are gamma-ray Pulsars.

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