

Hearing the Signal through the Static: Realtime Noise Reduction in the Hunt for Binary Black Holes and other Gravitational Wave Transients

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Real-time GW searches are plagued by “glitches”. E.g., GW170817 - a binary neutron star merger - had a delayed alert because we had to deal with data quality issues.

Goal: use machine learning to classify glitches in real-time in based on auxiliary information like seismometers, magnetometers, etc.

Currently can reject $\frac{2}{3}$ of the glitches with a 1% false dismissal. Working to make it even better.

