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Drapes: Diffusion for weak supervision

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We employ the diffusion framework to generate background enriched templates to be used in a downstream Anomaly Detection task (generally with CWoLa). We show how Drapes encompasses all modes of template generation, common in literature, and show State-of-the-art performance on the public RnD LHCO dataset.

Brainstorming idea [title]

Exploring alternative methods to CWoLa to improve sensitivity to low signal rates in weakly supervised AD searches

Brainstorming idea [abstract]

Currently, all template generation methods coupled with weak supervision (a la CWoLa) loose sensitivity in the low signal fraction regime. It would be of great interest to all physics searches if alternatives to this can be found which seeks to improve on the current best sensitives.

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