

## Preliminary Results on a Maximum Mean Discrepancy Approach for Seizure Detection

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**Abstract :** We introduce a data-driven method for seizure detection drawing on recent progress in Machine Learning. The method is based on embedding probability measures in a high (or infinite) dimensional reproducing kernel Hilbert space (RKHS) where the Maximum Mean Discrepancy (MMD) is computed. The MMD is metric between probability measures that are computed as the difference between the means of probability measures after being embedded in an RKHS. Working in RKHS provides a convenient, general functional-analytical framework for theoretical understanding of data. We apply this approach to the problem of seizure detection.

**Keywords :** kernel methods, maximum mean discrepancy, seizure detection, machine learning

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