The Common Spatial Pattern (CSP) technique can be used to extract discriminative patterns from an EEG. However, the operational frequency band of the EEG affects how well this spatial filter performs. and the method for classifying 2-class evoked electroencephalogram (EEG) data, but its effectiveness depends on the subject-specific frequency band.

Common options include the frequency range of 7-30 Hz, the time segment beginning 1 second after the cue, and two or three subsets of CSP filters (Blankertz et al., 2008b). However, subject-specific settings may be able to improve the CSP algorithm's performance (Blankertz et al., 2007).

Therefore, the CSP algorithm is frequently employed to either establish a large frequency range or manually choose a subject-specific frequency range.

This work suggests a unique Filter Bank Common Spatial Pattern (FBCSP) to perform an autonomous selection of significant temporal-spatial discriminative EEG properties in order to solve this issue. CSP features are then retrieved from each of the frequency bands created by bandpass filtering the EEG readings. Then, discriminative pairings of frequency bands and matching CSP characteristics are automatically chosen using a feature selection algorithm.

Ref:https://ieeexplore.ieee.org/document/4634130