Combining Brain Computer Interfaces with Vision for Object Categorization

Focus on the advantages of effectively combining the two different processing modes to build better visual categorization models.

With a system that learns visual categories by combining information from visual image features with the information measured from a human brain processing image.

Uses a kernel alignment based fusion scheme that combines the two modalities in a principled an efficient manner.

Based on the Pyramid Match Kernel (PMK)

Data include only the time window 100-500ms following stimulus presentation.

Used only data from 12 electrodes of interest (CP5, CP6, P3, Pz, P4, P7, P8, PO3, PO4, O1, O2, Oz), the channels expected to most closely measure human visual processing activity.