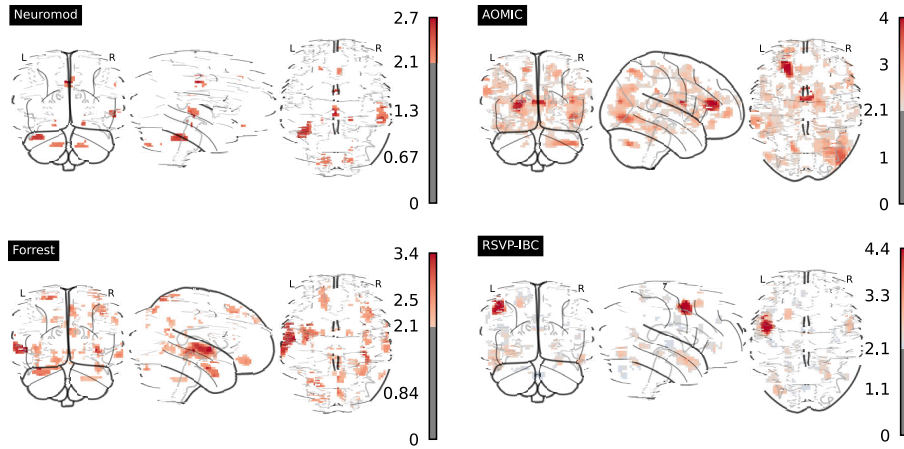


# Supplementary Material

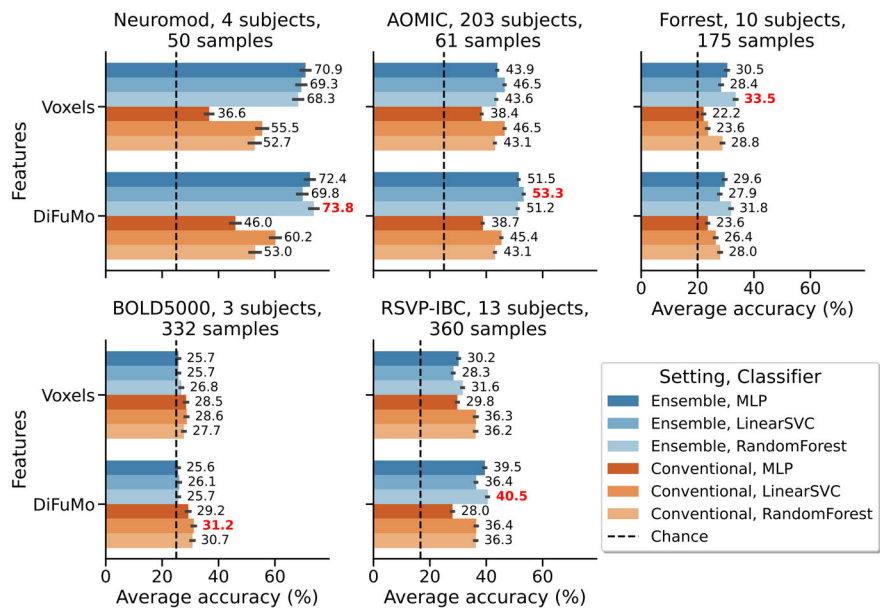
## Across-subject ensemble-learning alleviates the need for large samples for fMRI decoding

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**Fig. 1. Voxel-wise feature importance scores for one subject in each dataset:** The scores are z-scored and thresholded to only show the top 1 percentile. From left to right, top to bottom: the cognitive tasks performed in Neuromod is visual N-back, in AOMIC is emotion anticipation, in Forrest is music genre perception, and in RSVP-IBC is RSVP language task.



**Fig. 2. Decoding accuracy using linear SVC with  $l_1$  penalization during pre-training:** Overall average decoding accuracy across subjects, 20 cross-validation splits and ten training set sizes.