

# Appendix

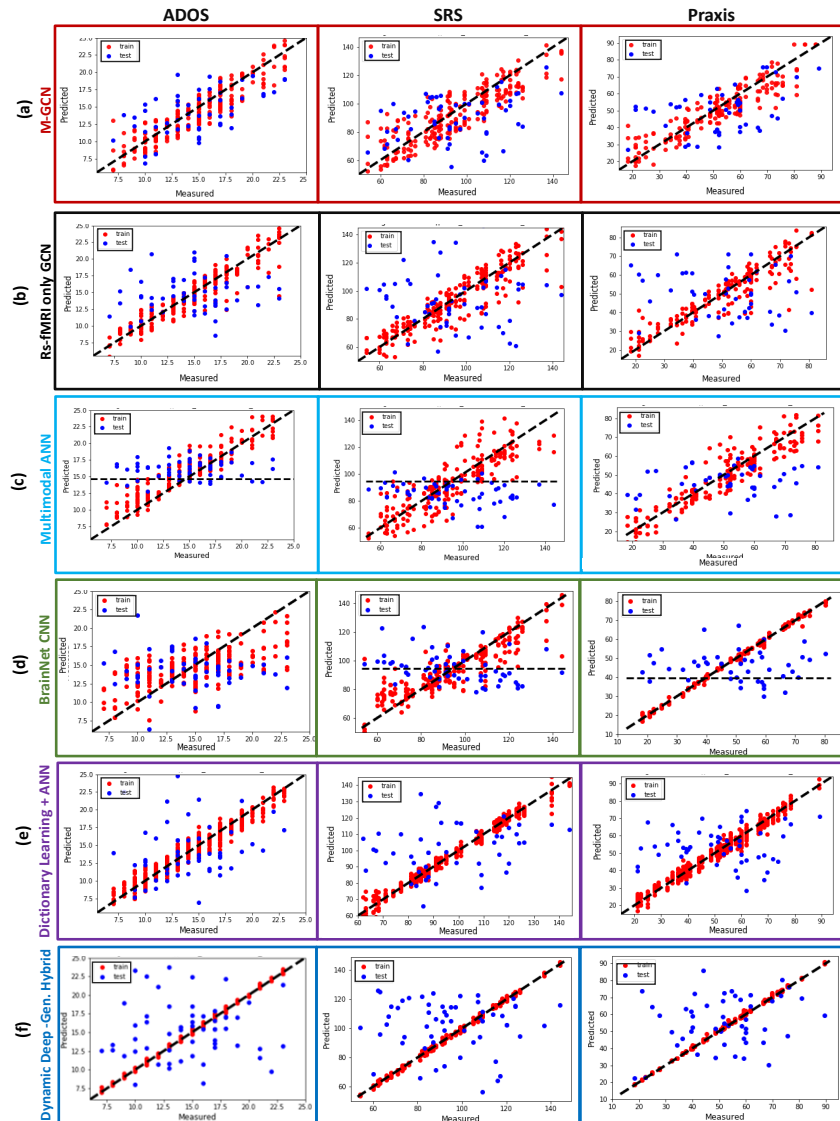


Figure 1: **KKI Dataset:** Multi-output prediction by **Left:** ADOS **Middle:** SRS **Right:** Praxis by (a) **Red Box:** M-GCN (b) **Black Box:** rs-fMRI only GCN (c) **Light Blue Box:** Multimodal ANN (d) **Green Box:** BrainNet CNN (e) **Purple Box:** Dictionary Learning + ANN (f) **Dark Blue Box:** Dynamic Deep-Generative Hybrid

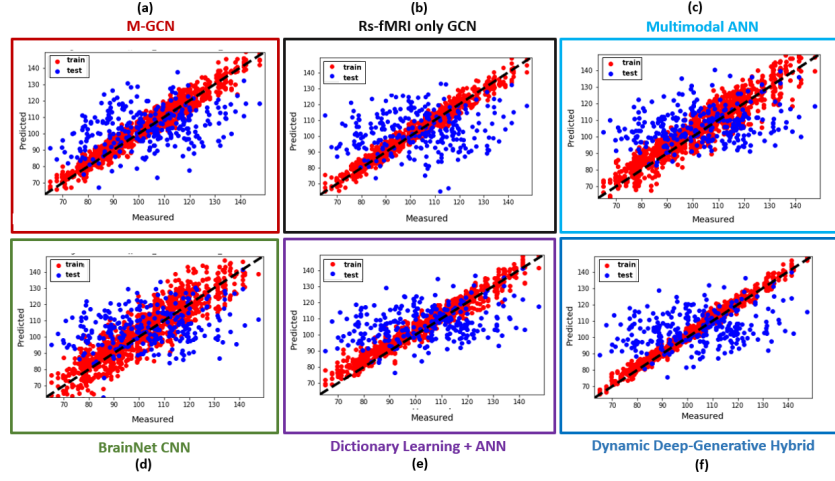


Figure 2: **HCP Dataset:** Prediction of Cognitive Fluid Intelligence Score by (a) **Red Box:** M-GCN (b) **Black Box:** rs-fMRI only GCN (c) **Light Blue Box:** Multimodal ANN (d) **Green Box:** BrainNet CNN (e) **Purple Box:** Dictionary Learning + ANN (f) **Dark Blue Box:** Dynamic Deep-Generative Hybrid

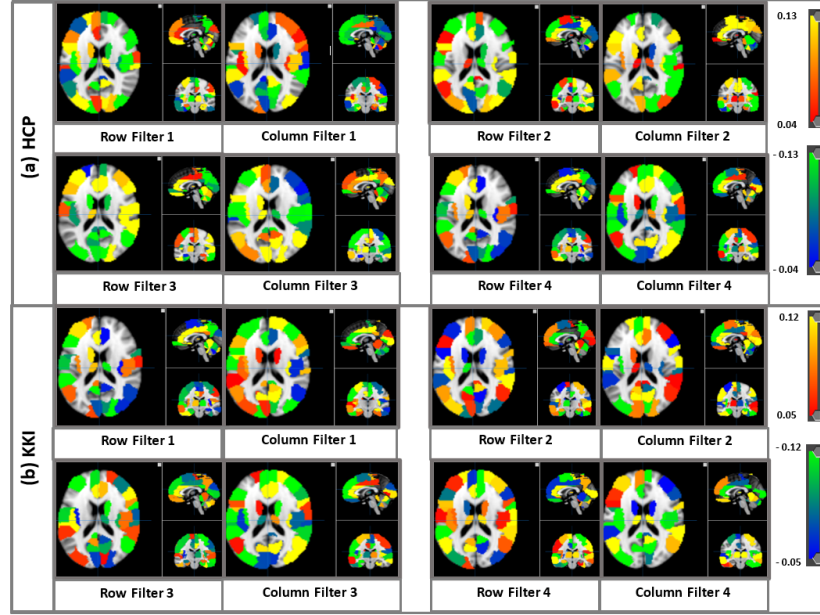


Figure 3: Four pairs of row & column filter weights learned by the rs-fMRI only GCN on the (a) HCP dataset (b) KKI dataset. The colorbar quantifies the filter weight for each AAL ROI. In contrast, the patterns in Fig. 3 are sparser and display lesser overlap across filters