Dataset 2: Youn et al., 2018 1.00 0.98 1.00 0.83 0.99 0.99 0.86 1.00 1.00 GA-1.00 0.00 0.00 (0.00) 0.00 0.00 (0.00 0.00 0.00 0.00 0.00 Random 0.88 0.86 0.90 0.84 0.91 0.84 0.76 0.88 0.90 XGB 0.90 0.85 0.92 0.83 0.83 0.94 0.97 1.00 1.00 0.71 0.93 Ridge 0.86 0.95 0.92 0.99 0.82 0.85 0.98 1.00 0.74 ElasticNet -0.94 0.83 0.97 0.82 0.87 0.96 0.93 0.98 0.78 0.97 0.94 Lasso 0.75 0.87 0.90 0.81 0.99 0.95 0.98 0.94 1.00 0.95 Mutual Info 0.90 0.86 0.87 0.98 0.97 1.00 0.80 0.99 1.00 **GBM** 0.97 0.85 0.96 0.90 0.90 0.99 0.99 0.99 0.83 1.00 0.97 RF 0.92 0.95 0.95 1.00 0.98 0.97 0.98 0.90 0.92 Chi-Squared 0.99 0.95 0.98 1.00 0.99 0.98 0.85 0.88 1.00 ANOVA F 0.96 0.99 **NMF ARI** Percenatage of remaining preys GO terms retrieval percentage **GMM** mean Pearson correlation NMF mean KL divergence NMF mean GO Jaccard index **GMM ARI** Overall Score NMF mean Cosine similarity Leiden ARI

